SOUTHERN
TEXTILE BULLETIN

VOLUME 27 CHARLOTTE, N. C., THURSDAY, JANUARY 15, 1925 NUMBER 20

Boyce Weavers' Knotter

THE exhaustive research, the effort and money devoted to the perfecting of the BOYCE WEAVERS' KNOTTER is more than repaid to the cotton mills by the far reaching success of this machine. The increased production, as evidenced by letter just received from the D. E. Rhyne chain of mills, shows what can be done with the use of Boyce Weavers' Knotters. This letter is dated Dec. 24, 1924, and is from the Howell Mfg. Co., the Cherryville Mfg. Co. and the Rhyne-Houser Mfg. Co., and reads:

"It may be of interest to you to know that after using the Boyce Weavers' Knotters for twelve months in our several mills they have given entire satisfaction. We have been enabled by their use to increase our production in spooling and winding from 25 to 40 per cent over hand tying, which has considerably reduced the costs in these departments by increased production.

We are glad to state also that it enables us to realize a premium of ONE CENT PER POUND for our yarns, and the knotters themselves were paid for by this saving in a very short time.

The assurance that every knot is a weaver's knot enables us to get this premium.

Yours very truly,

W. B. RHYNE,
Secretary-Treasurer.

Would you like to have a demonstration of the BOYCE WEAVERS' KNOTTER in YOUR mill?

A. B. CARTER
Treasurer
GASTONIA, N. C.

Howard Bros. Mfg. Co.

ESTABLISHED 1866

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Southern Branch Office — *1126 Healey Bldg., Atlanta, Ga.*
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Cylinder and Doffer Fillets
Napper Clothing

Stripper and Burnisher Fillets
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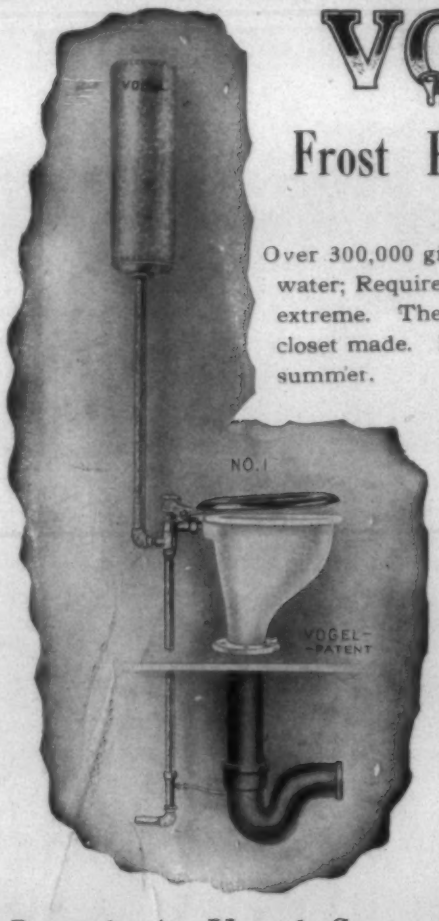
Top Flats and Lickerins Recovered and Promptly Returned

Tempered Steel Twin and Domestic Iron Wire Heddles
The Best Materials Obtainable Make Up Our Products

Give us a trial on Cylinder and Doffer Fillets. This will satisfy you as to the merits of our Card Clothing.

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Over 300,000 giving satisfaction. Save water; Require no pit; Simple in the extreme. The most durable water closet made. In service winter and summer.

Enameled roll flushing rim bowls.

Heavy brass valves.

Strong hardwood seat.

Heavy rivited tank.

Malleable seat castings will not break.

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Joseph A. Vogel Co. Wilmington, Del.

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Spinning, Twisting and Spooler Tapes
Than ever before

This increasing demand indicates the superiority of AMTEX Tapes over all others.

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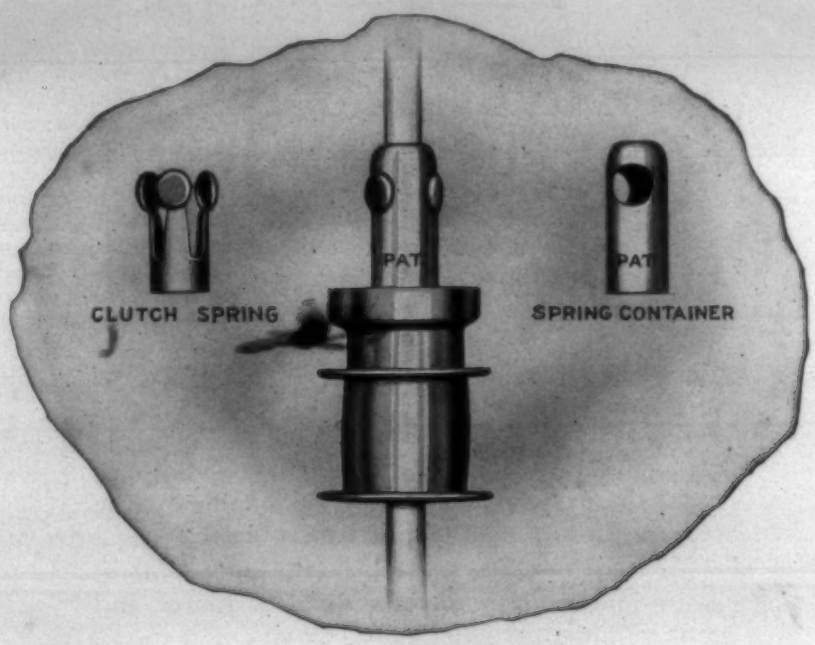
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FOR SPINNING AND TWISTING

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WHITIN MACHINE WORKS



SIMPLE, POSITIVE, CLEAN

This clutch is easily substituted for either Thompson clutch or Cone clutch. Assures maximum quantity of yarn on bobbins. All bobbins can be uniformly seated, with a full traverse resulting.

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NOW!

_____, 1925.

WHITIN MACHINE WORKS,
Whitinsville, Mass.

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Money Order

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Per _____



W
WESTINGHOUSE ELECTRIC

For Individual Textile Machinery Drive

FOR such equipment as spinning and twisting frames, cone winders, pickers, roving frames, etc., Westinghouse Textile Motors, with waste packed bearings, are of special design.

These motors are of the a-c. squirrel-cage type. They are dust and lint-proof. They can be mounted on textile machines for chain or gear drive, or can be direct-connected.

The many installations of Westinghouse Individual Motor Drive in textile mills indicate the successful operation of this equipment.

Have Westinghouse Electric textile mill engineers assist in the selection of individual motor and control equipment for your plant.

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East Pittsburgh Pennsylvania
Sales Offices in All Principal Cities of
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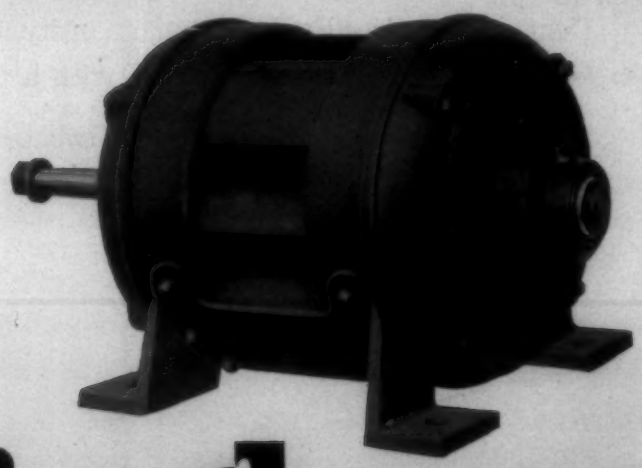
Some of the reasons why Westinghouse two and four-frame drive motors are giving such excellent service.

Stator—Steel construction gives maximum strength with light weight. Special insulated and moisture resisting winding.

Rotor—Brazed rotor which is indestructible.

Shaft—Large shaft of axle steel.

Bearings and Brackets—Dust proof.



Westinghouse

X 78409

An order book that reads like a Who's Who of the dry goods world

DOWN in Griffin, Georgia, is the second largest towel manufacturing plant in the world. Back in 1888, when it was started as the first towel mill in the South, it had a modest home, a handful of operatives, as much machinery and equipment as its credit would buy and a huge asset in faith and courage.

This combination seems to have been back of every great enterprise at its start and, with this precedent, the original small mill grew into a larger one which, in its turn outgrew one building and then another, until today the Georgia-Kincaid Mills operate five textile mills and two bleacheries, making more than 400 styles and patterns of towels, and in addition two other products, the famous Red Diamond diaper cloth and fine cotton corduroys.

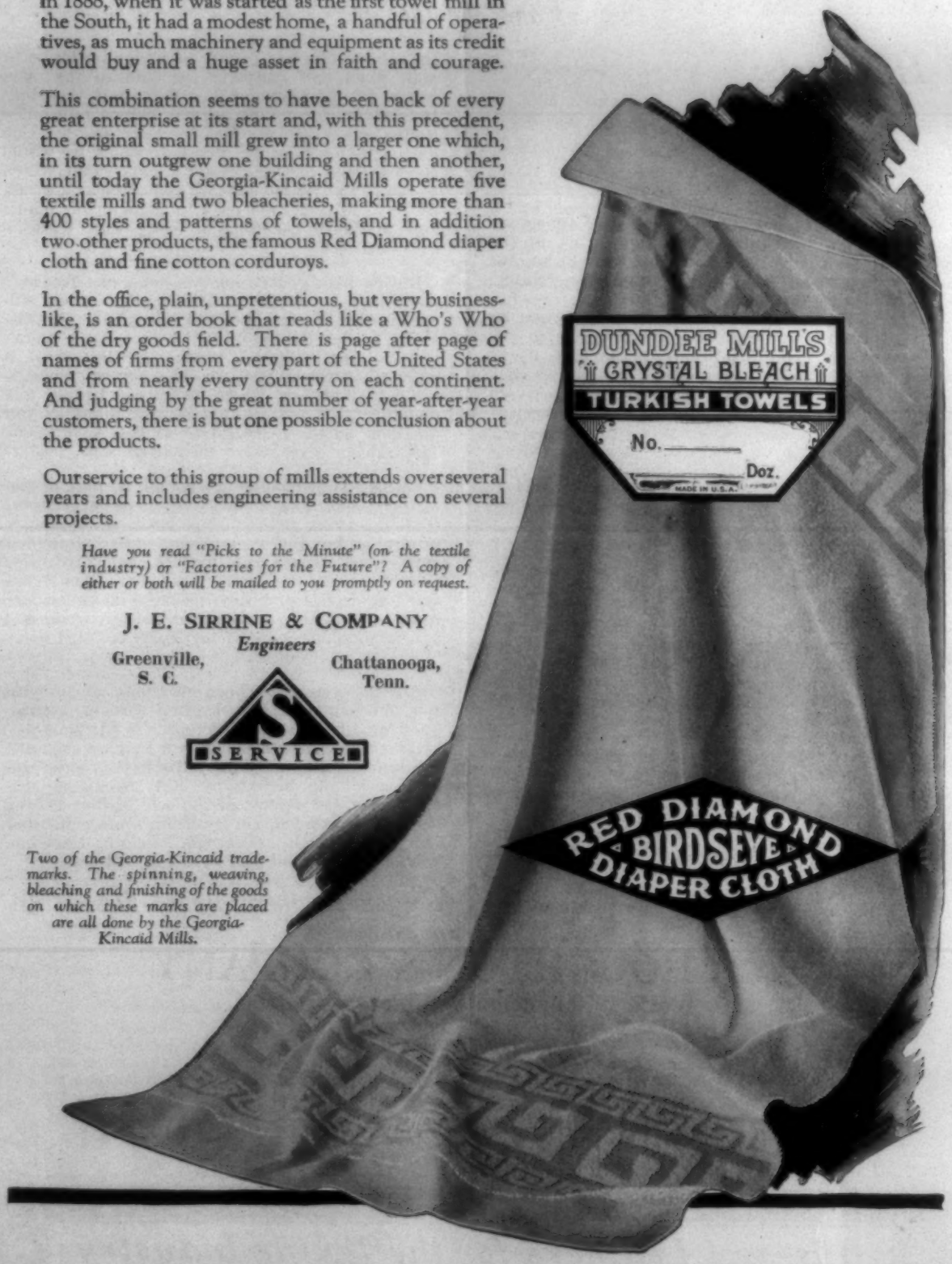
In the office, plain, unpretentious, but very business-like, is an order book that reads like a Who's Who of the dry goods field. There is page after page of names of firms from every part of the United States and from nearly every country on each continent. And judging by the great number of year-after-year customers, there is but one possible conclusion about the products.

Our service to this group of mills extends over several years and includes engineering assistance on several projects.

Have you read "Picks to the Minute" (on the textile industry) or "Factories for the Future"? A copy of either or both will be mailed to you promptly on request.

J. E. SIRRINE & COMPANY
Engineers
Greenville, S. C. Chattanooga, Tenn.

SERVICE



Two of the Georgia-Kincaid trade-marks. The spinning, weaving, bleaching and finishing of the goods on which these marks are placed are all done by the Georgia-Kincaid Mills.

HOUGHTON

A FLY LOT OF COPY

Shot by Chas. E. Carpenter
and Another

He Shoots:

Salisbury, Md.,
Dec. 20, 1924.

Mr. Chas. E. Carpenter,
E. F. Houghton & Co.,
Philadelphia, Pa.

Dear Sir:

I have read every one of your advertisements which have been appearing in the textile journals for the last year or so, but in spite of that fact I have not the slightest idea as to what business you are in, or what you have to sell. I suggest that it might be profitable to use some of the space to explain. There are others, perhaps, as dense as I.

Yours sincerely,
A. Overseer.

I Shoot:

December 27, 1924.

Mr. A. Overseer,
Salisbury, Md.

Dear Sir:

Acting on the suggestion contained in yours of the 20th, let us suppose that for years you had been in the habit of being awakened every morning by having a house fly walk around your face for ten minutes and bite you at intervals, and that you were of the opinion that it would not be practical for you to be thoroughly awakened, without the services of said fly?

Well! It would be our job, not to kill the fly or interfere with your habit of awakening, for that would be revolutionary and we do not believe in revolutionary methods. We would merely take said fly, disinfect him so as to insure you against infection from the millions of disease bacteria all normal flies carry; shave his legs so as to reduce the bacteria carrying capacity; manicure his nails so as to avoid danger of undue irritation of your skin, and cultivate the bite so that you would be thorough awakened in half the time, thus saving 5 minutes per day, which multiplied by 365 makes 1825 minutes per year, or 3 working days of 10 hours each. The hair which we would salvage from the legs would have a value, which would pay all of the expense and leave us a profit, so that you would not have to change your habits and would be benefited in every way, with no additional cost.

But perhaps your trouble is not flies. You may use tallow for warp conditioning, but tallow will not dissolve in water, but you worry along just the same, until a Houghton man comes along, shows you that HOUGHTON'S WARP CONDITIONER is merely natural tallow made best for warp conditioning, soluble in water, more penetrating and nonputrefying and all that sort of thing, so you up and adopt HOUGHTON'S WARP CONDITIONER and live happy ever afterward.

Perhaps your trouble is olive oil, lard oil, or red oil for wool. You know olive oil is never pure; lard oil seldom, and red oil of most unsatisfactory properties, but you worry along, until a Houghton man comes along, ascertains the stock you are running on and the results you desire; then shows you that he has precisely the same oil as you are using, prepared especially for use on wool, and you become one more of the 35,000 satisfied users of Houghton Products.

Perhaps you have been worrying along with the old-fashioned sole leather sort of belting, knowing all of its many defects. Well, some day a Houghton man will show you that by selecting the best hide, tanning it by the best process and making it into belting by best machinery and mechanics, the defects of the sole leather belting may all be avoided, not by using some substitute for leather such as canvas, oilcloth, linoleum, hair, or rubber, but just by using best leather.

So you see there are no flies on us.

E. F. HOUGHTON & COMPANY

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Oils and Leathers for the Textile Industry

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PUBLISHED EVERY THURSDAY BY CLARK PUBLISHING COMPANY, 39-41 S. CHURCH STREET, CHARLOTTE, N. C. SUBSCRIPTION $2.00 PER YEAR IN ADVANCE. ENTERED AS SECOND CLASS MAIL MATTER MARCH 2, 1911, AT POSTOFFICE, CHARLOTTE, N. C., UNDER ACT OF CONGRESS, MAR. 3, 1879.

VOLUME 27 | CHARLOTTE, N. C., THURSDAY, JANUARY 15, 1925 | NUMBER 20

International Trade in American Cotton Goods

IN a prepared statement issued on "International Trade in American Textiles for 1924," Edward T. Pickard, chief of the Textile Division, Department of Commerce, Washington, after citing facts which should "attract the attention and command the consideration of the best analytical minds in the textile industry," declared that "If we are to continue to progress in domestic and international trade a long range view must be taken, definite policies formulated, and operation be based on known facts rather than hunches."

Some of the startling conclusions reached by Mr. Pickard in his analysis are:

1. Our per capita consumption of cotton cloths in square yards has not increased to any marked extent during the last 25 years.

2. Exports of cotton cloths, while slightly above 1923 in yardage, have hardly improved over a decade ago.

3. Decrease in exports of cotton hosiery and underwear, and 50 per cent increase in value of silk hose.

4. Decrease in value of imports of raw silk, due probably to increased demand for rayon.

5. Ten per cent increase in cotton wearing apparel during 1924 as compared with 1923.

6. Narrowing margin between wholesale selling price of certain types of gray cloths in Manchester and in the United States.

7. Failure of manufacturers and merchants to keep pace with the general impulse of the domestic consumer.

Pickard's Statement.

Mr. Pickard's statement follows in full:

"Based upon figures now available, it would appear that the foreign trade of the United States in textile fibers and their products has been well maintained for the year 1924. In animal and vegetable fibers and manufactures thereof, we account for approximately 24 per cent of the value of our total imports. In fact, raw cotton, cotton cloth and cotton wearing apparel comprise about 30 per cent of the value of our 50 leading exports. The range of imports bearing upon the textile trades is much more diversified, and includes silk, wool, burlap, cotton, cotton cloths, wool fabrics, laces, embroideries, sisal and Manila fiber, carpets, silk goods and wearing apparel. Although these materials are of great importance in the value of our import trade, approximately 24 per cent of the total, it would assume a much more formidable proportion were it not that sugar, rubber, coffee and furs themselves were imported into this country during 1924 to the extent of almost $1,000,000,000.

"It may be conservatively stated, therefore, that the total international trade of the United States in textile fibers and manufactures thereof, is placed at 25 per cent of the total. Sharing to this substantial extent in the foreign trade is extremely gratifying and is a tribute to American textile enterprise; but it also bespeaks a deep responsibility in international economics and commerce. The remotest area as well as the world's commercial capitals are sensitive to the pulsations of American business, and we in turn should study all factors involving the supply and demand of world's markets.

Cotton Cloths Hold Own.

"Our exports of cotton cloths, while slightly above last year in yardage, have hardly improved over a decade ago. This, however, is not due to apathy or lack of enterprise, for most of the other producing nations exported in 1924 substantially less in volume than they did ten years ago.

"To a minor extent, the reduced consumption of cotton goods throughout the world may be attributed to changes in fashion or in the habits of the consuming public, but the basic reason still rests in the inability of the world to measure their per capita purchasing power with materially increased cloth values. Our best cotton markets continue to be those in Latin-America, Canada, the Insular possessions, the Near East, Persian Gulf, Austral-Asia and South Africa, Egypt, the Netherlands, East Indies and Malays consume enormous quantities of cotton cloth annually, but the share of the United States in their trade could almost be dramatized in a row of ciphers. No doubt many of the cloths which we produce are suitable or might be made easily adaptable to those markets, and it has been quite gratifying to observe that during the last year several American firms have managed to book substantial orders in Egypt and Java.

"Our exports of cotton yarns have increased, although cotton hosiery and underwear have decreased. On the other hand, exports of silk hosiery were almost 50 per cent higher in value than a year ago, amounting in 1924 to about $7,000,000.

Catalog of Imports.

"A catalog of general imports in points of value shows cotton cloths 20 on the list, wool fabrics 29 and cotton laces and embroideries 38; yet, of all manufactured goods, imported cotton cloth holds forth in first place, while wool fabrics are second and cotton cloth holds forth in first place, while wool fabrics are second and cotton laces and embroideries third. It is a matter of no small concern to many of our manufacturers that these first three items among the great range of imported manufactured materials are in the textile field and are highly competitive with products of our home mills.

"In 1923, we imported about 220,000,000 square yards of cotton cloths, and current figures indicate that the total imports of such cloths for 1924 will be between 170,000,000 to 175,000,000 square yards. Notwithstanding this substantial decrease in the total importation of all cloths, gray or unfinished goods, which in 1923 were imported to the extent of about 95,000,000 square yards have increased during 1924 to between 105,000,000 and 110,000,000 square yards. Compare this figure with the 3,500,000 square yards imported ten years ago and the significance of this important movement receives further emphasis.

Imports of raw silk have not been so substantial in value as compared with 1923, and it is difficult to define the causes. Probably the spreading demand for rayon fabrics, either of the pure fiber or combined with other textile fibers, has had a marked effect, and then the price differential between rayon and pure silk must also be reckoned with.

Less of Raw Wool.

"Unmanufactured wool has been imported during 1924 to much reduced quantities, although recent months show a decided improvement over similar months a year ago. Among the various types of wool, the only ones which show an increase over last year are noils and carpet wools. The allusion to the decreased value in raw silk imports is also reflected in the decreased values of silk goods imported, especially broadsilks, which this year are likely to be but 75 per cent in value of the imports during 1923.

"One of the interesting import items is that of cotton wearing apparel, which in 1923 was valued at about $12,000,000, whereas in 1924, the imports increased about 10 per cent.

"Another notable movement during the last year has been the narrowing margin between the wholesale selling price of certain types of gray cloth in Manchester and in the United States. A year ago, the average price of one-half dozen gray cloths in Manchester at current rates of exchange was about 47½ cents per pound, while the average price on the same range of cloths in the New York market was 57½ cents, a differential of 10 cents per pound in favor of the English goods. At that time, spot cotton was selling in the New York market at close to 37 cents per pound. Quotations on the same range of cloths at the end of last December at current rates of exchange were 47.9 cents per pound in Manchester and 48.6 cents per pound in New York, less than ¾ cents per pound difference. On December 29, raw cotton was quoted in the New York market at about 25 cents per pound for spots. In fact, early in November these same cloths were quoted in the New York market at nearly ½ cent per pound less than for similar goods made in Manchester, and at one time later in the month showed 1 cent per pound differential in our favor. This was at a time when cotton was selling for approximately 25½ cents per pound in the New York market. It would, therefore, appear conclusive that the prevailing price of cotton has a decided effect upon the spread of these competitive prices for cloths, and that when cotton is selling at a high price Manchester has been able to underquote us full 10 cents per pound, while cotton at 25 cents per pound or thereabouts bring Manchester and New York cloth quotations almost to a parity.

Manchester Prices Steadier.

"Another thing worthy of note is that the prices in Manchester on this one-half dozen standard gray cloths have fluctuated during the year very little as compared with the American goods quoted in New York. In fact, the difference between the highest and the lowest price during the last year in Manchester was 4 cents per pound for goods, while in New York the difference was 13 cents per pound.

(Continued on Page 32)

Changes Urged in Cotton Textiles

THE following article from the Journal of Commerce will be found of unusual interest at this time:

According to many of the leaders of the industry there is nothing the matter with the textile business. But from the viewpoint of an outsider, who has studied the situation and observed the evolution and far-reaching results of some of the basic evils, there is a good deal the matter with the textile business. We are not concerned herein with either silk textiles or woolen textiles, although to a large extent they are suffering from the same disadvantages that are the cause of red ink figures on the books of Northern cotton mills.

To paraphrase an old expression, some businesses inherit trade evils, some acquire them, and some businesses have trade evils thrust upon them. Many of the present difficulties now being encountered by cotton manufacturers are logical developments of trade customs and precedent which originated a hundred years ago.

Everyone recognizes that speculation in raw materials is a basic evil, not only in textile manufacturing but in all other lines where raw materials are purchased to be converted into a finished form. It is perhaps true that this evil of raw material speculation does not assume the important position in metals and foodstuffs that it does in textile manufacturing. But no foolproof method of eliminating this evil has yet been found.

There are, however, existing in the cotton manufacturing business today, errors of omission and commission, which if remedied, would change the complexion of cotton manufacturing in the United States.

Fifty years ago it was customary rather than unusual for the manufacturer of any product to be interested more in manufacturing methods than in any other department of his business. He was controlled by his market, or to put it another way, he gave little thought to creating and directing the market. It is only within comparatively recent times that manufacturers have known the benefits of standardizing manufacturing and influencing the market so that demand will coincide with supply.

Correlation of these two important branches of business is impossible unless selling and manufacturing are under one head. Therefore, it is difficult for the textile business to bring itself up to date so long as the selling organization is at one time independent of the manufacturing branch and yet can dictate what the manufacturing branch shall produce.

Manufacturers in practically every every other line of business today have come to the realization that the era of large manufacturing profits has passed. With almost universal standardization of machinery and manufacturing methods one concern can have slight advantage over a competitor in so far as manufacturing itself is concerned.

Selling and Merchandising.

A little consideration of that fact sugges's the conclusion that substantial profits from this time forward are to be entirely dependent upon selling and merchandising. Therein lies the reason why the cotton textile manufacturing business lags far behind other branches of industry.

Mill properties are guaran'eeing profits to their selling agents while they themselves assume the risks of loss. Textile mill operation pays a profit only on the last 10 per cent or less of maximum production, but selling agents are able to make some money on any fair amount of sales.

And, in spite of the fact that the mill takes all the risk, it is generally the selling agent who dictates the kind and quantity of goods the mill shall manufacture. In other words, unsalable or slow selling merchandise becomes mill inventory liability in spite of the fact that it is frequently the selling agent's fault that that inventory is unsalable.

Why put the blame for the present unprosperous conditions of Northern textile manufacturing on the high cost of operation in the North? A shoe manufacturer in Rochester, N. Y., can certainly produce more cheaply because of lower labor costs and overhead than can a shoe manufacturer in Brooklyn. The unimportance of this advantage of geographical location can best be gauged by the fact that Rochester manufacturers today are in difficulties, while most of the Brooklyn manufacturers are operating at full time. What's the reason?

The Brooklyn manufacturer has built into his product, quality and style that are unique—quality that is easily recognizable by the customer and style that the modern woman insists upon having.

It is obvious that any manufacturing advantage that the Southern manufacturer may have may be easily overcome by any textile manufacturer who will go to the pains of putting style and quality into his merchandise that will make it unique and readily marketable.

Says Tariff Not the Remedy.

In the past ten years the volume of manufactured cotton materials coming into this country from abroad has increased to such an extent that tariff is the subject of the day on Worth street.

Why does the American woman buy French and English cottons when she can buy merchandise made in the United States America at a lower price, and according to the American mill, of equal quality?

Before considering the question of foreign competition remember that cotton textiles group themselves into three broad classes — utility goods, staple goods, and style goods.

Utility goods are definable as goods adapted to further conversion for industrial use. Staple goods are goods chiefly used for clothing, the character of which is not subject to frequent or radical change. Another name for this class might be staple style goods. But style goods are goods used almost exclusively for clothing and the character of which is subject to change, both frequent and radical.

In the production of utility goods neither the manufacturer nor the selling factor controls the market except so far as quality of service as uniformity, meeting of customers' specifications, delivery, etc., may be involved. On the other hand, by proper mill scheduling, based on the order book, it is possible to avoid practically all inventory crarying charges and all inventory losses. American mills are profitably producing utility goods. This market, however, is not susceptible of sizable development.

It must also be borne in mind that offsetting these apparent advantages is the great disadvantage of a price control of this market. Goods of a utility character are so standard in quality and specification that the big talking point is price and this goes directly back to the question of raw material speculation. For that reason the advantage held by any one manufacturer is dependable to the extreme on his success in pre-valuing cotton futures.

In the manufacture of staple goods there is only slightly greater control of the market by the mill or mill agent. This, too, is a price market, and while the manufacturer's advantage or disadvantage because of price may not be so highly acute as in the case of utility goods, he is faced today with a prospect of seeing the market fade gradually away because of the modern woman's desire to wear as little as she can. Ask any white goods buyer what has happened to the market for longcloth, muslin, etc. And there you will have the answer to what is wrong with the market for staple cotton goods.

Question of Styling.

The preceding consideration of utility and staple goods automatically leads to the conclusion that in style goods only has the American manufacturer an opportunity to regain his old-time profit position, for in style goods, price competition is not important because style creation, like other forms of creative art, commands a price entirely unrelated to actual cost. Possible profits are limited only by the ability and accuracy of the manufacturer in anticipating and creating styles.

Of course, there is the ever-present liability of inventory losses due to the transient nature of styles and to the further fact that style goods, because they are style goods, progressively destroy their own market. But it must not be forgotten that the manufacturer who can come into the market first and get out of the market first, reaps a profit out of all proportion to his investment. And it must furthermore be borne in mind that the American woman recognizes that she must pay a premium to be in style. For that reason, high prices for authentic style merchandise are never a genuine selling handicap.

How then can the American cotton manufacturer take advantage of the situation and turn his production over to that class of merchandise which will guarantee him the highest profit and put him beyond competition.

Going back again to the question of imports, it is a matter of common knowledge that most of the cotton fabrics imported from France come in the classification of style goods. How does the French manufacturer handle that situation? Why does the American woman prefer to pay $1.50 a yard for a French material when an American fabric costing one-quarter that much will answer the same purpose?

It is because the French manufacturer succeeds in putting into his fabrics an elusive quality made up of design, color and finish which to the American woman represents style.

Listen to any conversation of American manufacturers and you will hear that the American woman buys these materials only because they are imported—that she likes to tell her friends that she is wearing a fabric made abroad. But go out into the marketing centers of the country and talk to Mrs. Average herself. Find out from the ultimate consumer the real reason why she chooses imported fabrics in preference to domestics. You will find that it is because the foreign fabrics hace the elusive quality of style—a quality which makes them beautiful, modern and chic in the eyes of the American woman.

Silk Men Turn to Paris.

The silk manufacturers of America, realizing that Paris is the natural creative center of the world, in so far as fabrics and washions are concerned, have turned to Paris and French designers for their basic designs and ideas. This answers the question of why the silk industry in the United States has gone forward by such leaps and bounds, while cotton manufacturing has foundered in a sea of uncertainty and stagnation.

It is a well known fact that the leading silk manufacturers of America have representatives in Paris practically the whole year around and these men and women keep so closely in touch with this development of style that they can interpret the factors that influence style in such a way that they can be transmitted into fashionable silk fabrics which the American woman will buy on sight.

On the other hand, cotton manu-

(Continued on Page 32)

A Consultation of Experts

When the expert dyer finds it expedient to consult with other experts on dyeing, the services of experienced dye men are available at each National Branch Office.

Every five minutes during 1924, National forwarded an answer to some dyeing problem, a total of over 26,000 laboratory reports.

National Aniline & Chemical Company, Inc.
40 Rector Street, New York, N.Y.

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This holds true of all Standardized Series belts. It puts your belting on a business basis. It assures you of the constant satisfaction that only the finest of leather belts can give.

Write for booklet 101-Q, which gives full information about Standardized Series belts for textile mills.

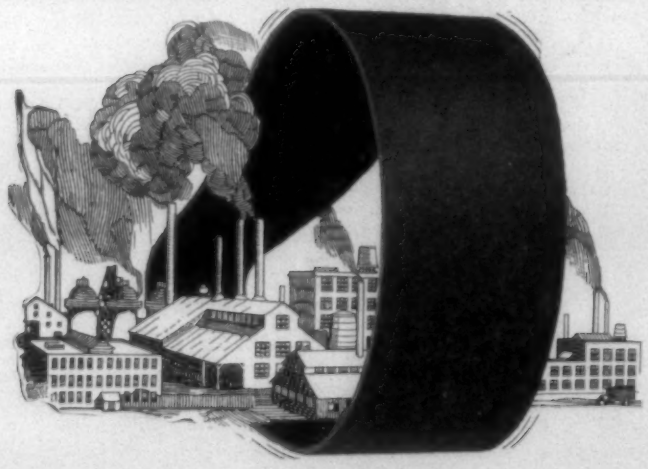
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Development of the Spinning Frame

Extracts from Paper Presented Before the Textile Division of the American Society of Mechanical Engineers by Robt. E. Naumburg, head of the Patent and Research Department of Saco-Lowell Shops.

THERE are few industries which were developed as highly as the textile industry at such an early period, and then remained practically stationary for several thousand years. There are few industries, which after transmission from generation to generation, without improvement, for centuries, have been completely revolutionized within a lifetime. Now, after less than two centuries of development—from 1738 to the present day—in which machinery has steadily replaced hand labor, a stage of remarkable perfection has been reached. Nevertheless there are many who believe that the textile industry is about to take another great step forward.

The spinning frame in its early form—that of the spinning wheel—is very old, having been used in the Orient for 3,000 years and having been introduced into Europe between the fourteenth and sixteenth centuries. It remained in the form of a crude, primitive device till much later, although there was an interesting invention by the versatile Leonardo da Vinci that anticipates many modern features.

One of the first United States patents on a spinning wheel was granted to H. Wilson in 1818. Its principle embodied the application of the treadle wheel with crank and connecting rod, allowing the use of both hands for spinning. This principle made possible the use of two spindles on a spinning wheel, operated simultaneously by one person, and was therefore a great improvement over primitive forms. This is the highest number of spindles per operative ever attained on the spinning wheel.

Richard Arkwright's Patent

The first patent on a spinning frame with more than two spindles per operative was granted to Richard Arkwright, of Nottingham, England, in 1769. His patent showed four spindles to a machine, all of the spindles being located on one side of the frame. The power to drive Arkwright's machine was originally furnished by a horse. Later, he used water power and his frame became known as a "water frame." Although "water" has been dropped from modern English nomenclature, we sill use the term "frame" in connection with spinning machinery. Machines like Arkwright's were also known as "throstles" and "jack frames."

Another interesting point in regard to nomenclature of the art, is the term "crown gear" as applied to a spur gear which drives the back rolls of a modern spinning frame. In Arkwright's Patent the wheels which drives the drawing rolls is actually a crown gear, that is, a gear made up of a disk with pins inserted around its circumference. Although the construction has long since been changed, the "crown gear" of Arkwirght survives in the nomenclature of the spinning frame of today.

The Spinning Jenny

James Hargraves, also of Nottingham, England, obtained a British patent on his "spinning jenny" in 1770. In his specification, he claimed a wheel or engine which would spin, draw, and twist sixteen or more threads at one time by a turn or motion of one hand and a draw of the other. Unlike Arkwright, Hargraves did not limit himself to a definite number of spindles. In addition to applying the principle of the spinning wheel to a large number of spindles, he introduced a reciprocating motion of the spindles to and form the point where the cotton was delivered. He did not use drawing rollers, but employed spindle draft to draw out the thread to the required fineness.

The mule was invented by Samuel Crompton between 1774 and 1779, but was not patented by him. It was called a "mule," not on account of the source of power to drive it, but because it was a cross between a "jack" frame and a "jenny." The mule combined the drafting rolls used by Arkwright with the reciprocating carriage invented by Hargraves. Both the jenny and the mule were intermittent and they alternately twisted and wound the yarn on to the bobbin.

Arkwright's spinning or water frame, on the other hand, was practically continuous, and he is justly known as the inventor of the first successful continuous-process, power-driven spinning frame.

Early Spinning Frames

The general arrangement of Arkwright's frame of 155 years ago, bears a close resemblance to the present-day spining frames. It is interesting to note the drawing rolls and their relation to the spindles; the group of four spindles driven by a belt; the framework as a whole and the rails which support the spindles; the rod which serves as a thread board; and the complicated system of weighting the top rolls which accomplishes the same results as attained on a modern frame. The bobbin is not positively driven but is dragged around by the yarn. The friction or drag which causes the bobbin to lag behind the flier is furnished by a worsted band which is not allowed to revolve. This is similar in principle to the leather washer on the present day system of "open drawing" used on worsted flier spinning and roving frames, which have no cones or differential motion.

Many different designs of spinning frames were attempted in the years immediately following Arkwright, but there are few general designs, if any, which have been proposed in recent years which were not anticipated many years ago.

(Continued on Page 14)

An Idea that took Fifteen Years to perfect

Automatic Spooling *High Speed* Warping

Output at Half the Cost
Increased Quality

TIME is the sure test of judgment — when Barber-Colman Company first announced its Automatic Spoolers and High Speed Warpers there were some mill operators who had the vision to see at once far greater production, higher and more uniform quality, tremendous saving.

These executives who had faith right from the start have seen their good judgment substantiated over and over again—their Barber-Colman installations have paid for themselves and will continue to earn dividends for many years to come.

Others have watched expectantly—good reports from mills who are using Barber-Colman Automatic Spoolers and High Speed Warpers have convinced them—they are making immediate equipment plans.

Then there are some fully convinced, but hesitating—initial cost is unessential as compared with results performed, is a conclusion they will eventually realize.

Still others are eagerly anticipating the day when favorable market conditions will warrant additional investment in equipment—Barber-Colman Automatic Spoolers and High Speed Warpers are foremost in their anticipated plans for new, time, money and labor saving equipment.

No one type of equipment entirely different from century old methods has ever sold itself so thoroughly to cotton mill operators.

Those mills having Barber-Colman installations can point to an advantage in much higher quality produced at a saving in Spooling and Warping operations.

Seven years of continuous tests made in the weave rooms of both Northern and Southern mills have proved conclusively that warps made on Barber-Colman Automatic Spoolers and High Speed Warpers run with 25% to 30% less loom stops, with an increase of from 1% to 2% in loom production. It is a source of considerable pleasure to Barber-Colman Company to learn from statements made by mills who have invested their money in these Automatic Spoolers and High Speed Warpers since these tests were made that the practical operation of the machines shows undeniable evidence of the correctness of the results of these tests.

The saving of half the labor cost in the spooling and warping department combined with the advantage of a reduction in weave room labor due to decreased stops; a higher percentage of production of the looms for the same reason; a reduction of 75% of the inventory of the yarn tied up in the spooling and warping department; a saving of one-half of the floor space, of particular advantage to new mills, result in profits which produce a most satisfactory dividend on the investment in Barber-Colman Company machinery.



"mills can't hope to meet competition without Barber-Colman Automatic Spoolers and High Speed Warpers"

Progressive mill operators have come to look upon the installation of Barber-Colman Automatic Spoolers and Warpers as purely a decision of making an initial investment which in a given period of time is certain to re-earn itself with many more years of continuous extra profits—most satisfactory dividends equivalent to the cost of the initial equipment many times over.

A careful estimate will be submitted upon request to all mill operators desirous of examining definite figures of operating costs of Barber-Colman Automatic Spoolers and High Speed Warpers, saving in labor costs, increased quality production, etc., net savings that will pay for an installation in a short time.

B V C
TRADE MARK

BARBER-COLMAN COMPANY
ROCKFORD, ILLINOIS

BOSTON, MASS. GREENVILLE, N. C.

Singeing Fabrics Prior to Printing

THE reader is, perhaps, already familiar with three processes for singeing cotton cloth that is yet to be bleached and printed. There is (1) the two-plate apparatus where two arches of copper form the roofs of two horizontal flues through which the flames from a coal or a coke fire are conducted. A variation is where a fuel gas is employed immediately underneath the arches. (2) The roller singeing machine, where the cloth is drawn over a hollow roller which is in rotation in the direction opposite to the movement of the fabric at the region of contact, this roller being heated in the same way as the before-mentioned copper arches. The roller may be of iron. (3) The gas singeing machine which operates by using open gas flames is the third type of apparatus, and is perhaps destined to supplant the others.

Where two copper arches are employed, the temperatures are to be, say, those produced by a red. It will not do to heat copper too far. At any rate, the two arches should, it seems, be heated to different temperatures. Perhaps this idea is not followed everywhere. If the reader is not using two different heats, it is suggested that he try this procedure. The arch with which the cloth first comes in contact is to be the cooler of the two. The purpose is to prepare the fabric for the complete singeing effected by the hotter arch. Both plates are to be at a red heat, one having a duller red than the other.

After leaving the two arches, the fabric is conducted at once through a spark-extinguishing chamber consisting of a steam box, a water trough, or some equivalent. The object here is to quench any fluff or other material that is still burning.

Disadvantage.

The opinion has been expressed that the principal disadvantage of the plate-singeing method is that the singeing is apt to be more or less uneven or "stripey." This is a defect which will manifest itself rather distinctly when certain styles of dyeing, printing and finishing are employed. The irregular singeing has been explained as due to irregular heating or unequal plate-wear.

Advantages of the Rotary Roller Machine.

It is said that the foregoing disadvantage may be almost entirely overcome where the metal surface is not stationary but rotates.

Gas Singeing.

In singeing with gas—ordinary city gas—we may use open flames may be employed to heat metal arches or hollow rolls. In general, however, when gas singeing is mentioned, we are to understand that singeing by means of bare flames is the thing meant.

When open flames are used, two procedures are followed. In the one, the gas flame is drawn through the fabric from one face to the other by the use of an exhaust box against one side of the fabric and a gas flame originating on the other side. Apparently, this procedure is very searching. It would seem as if no fluff could escape. However, in Edmund Knecht and J. B. Fothergill's large work on The Principles and Practice of Textile Printing (2nd ed., 1924), we have, p. 96, the following statement: "Exhaust hoods are frequently placed above the cloth, immediately over the flames, for the express purpose of drawing the flame through the body of the fabric, the idea being that its singeing power is thereby increased. Whatever theoretical reasons may be advanced in support of this idea, it is certain that, in practice, gas singeing machines yield better results when the flame is allowed to play freely on the under side of the cloth than when the exhaust hoods are in operation, and that, except in the case of very open fabrics, the exhaust hoods do not even draw the flame through the material, as is claimed for them. A long series of practical trials carried out on different types of gas singeing machines amply demonstrated that the only effect of the exhaust hoods was to localize the flame without adding to its intensity, as judged by the quality of the singeing it gave. As a matter of fact, the machines fitted with exhaust hoods yielded consistently poor results: the hoods were removed, and the flame allowed to spread out along the under side of the cloth, the result being that the singeing was perfectly satisfactory. The only inference to be drawn from this was, that the hoods were not merely useless but harmful. They doubtless increase the actual temperature of the flame by concentrating its power within narrowed limits, but at the same time they reduce its efficiency by restricting its sphere of action, the increase in the temperature of the flame not being commensurate with the decrease in the area of the cloth upon which it acts at a given moment. Of course, if the speed at which the cloth passes over the flame is reduced, it is possible to secure satisfactory singeing, but at the cost of lower production."—Textile Colorist.

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Send us your raw silk. We will inspect and throw it for you. It will be handled by the same organization and with the same care as material destined for the Duplan looms which are famed for quality. Canton Tram, Tussah Tram, Hosiery Tram, and Combination Yarns our specialties.

NEW YORK OFFICE
135 MADISON AVENUE

Research Department for N. C. Textile School

Raleigh, N. C.—It is announced by President E. C. Brooks that James McDowell, of Boston, an expert on research in textile manufacturing, has been employed to direct the research work in the Textile School of State College and will begin his duties in North Carolina on January 15.

At the present time Mr. McDowell is the technical expert in textile manufacturing for the Sharp and Hamilton Mills of New England, and the Brighton Mills of New Jersey. He is also special lecturer in the textile schools of Lowell and New Bedford, and is considered one of the foremost textile experts in America.

The Textile School of State College, under the leadership of Professor Thomas Nelson, has come to be recognized as one of the leading textile schools of the South and compares very favorably with similar schools of New England. When the Board of Trustees decided last June to enlarge this department of the college and make it serve in a much more effective way the textile industry of the State, it was observed by a committee of manufacturers appointed by the Board of Trustees that the developments should be especially in the field of research and somewhat along the following lines:

1. A study of the cotton fibre from various sections of the cotton growing areas of North Carolina and elsewhere, with special emphasis on their affinity for bleaching, dyeing and mercerization.

2. Testing yarns and cloth from different cotton and staple fabrics to determine shrinkage, standard breaking strength, etc.

3. Testing of starches used in sizing and testing dyes and their properties.

4. Studying the problem of waste, due to selection of imperfect fibre, and improper use of machinery.

5. Testing the uses of the cotton fibre for mechanical as well as domestic uses and extending the research into market demands.

6. Studying designs and methods of finishing goods and the economic advantage to be derived from manufacturing fabrics or higher standards.

7. Studying the cotton mills of North Carolina, their mechanical equipment, and what gradual changes may be effected in order to meet the market demands of the future.

In seeking a man to direct this research work, President Brooks visited the leading textile schools of the country, but discovered that they were doing little more than was already being done at State College. But while in New England, he was often referred to Mr. James McDowell, of Boston, whose laboratories served the mills of New England, and even of Scotland and England.

"When I entered his laboratory," said President Brooks, "the first object to attract my attention was a row of cotton plants cultivated in the laboratory. Each plant had reached its full maturity and was white with the fibre, hanging down through the branches."

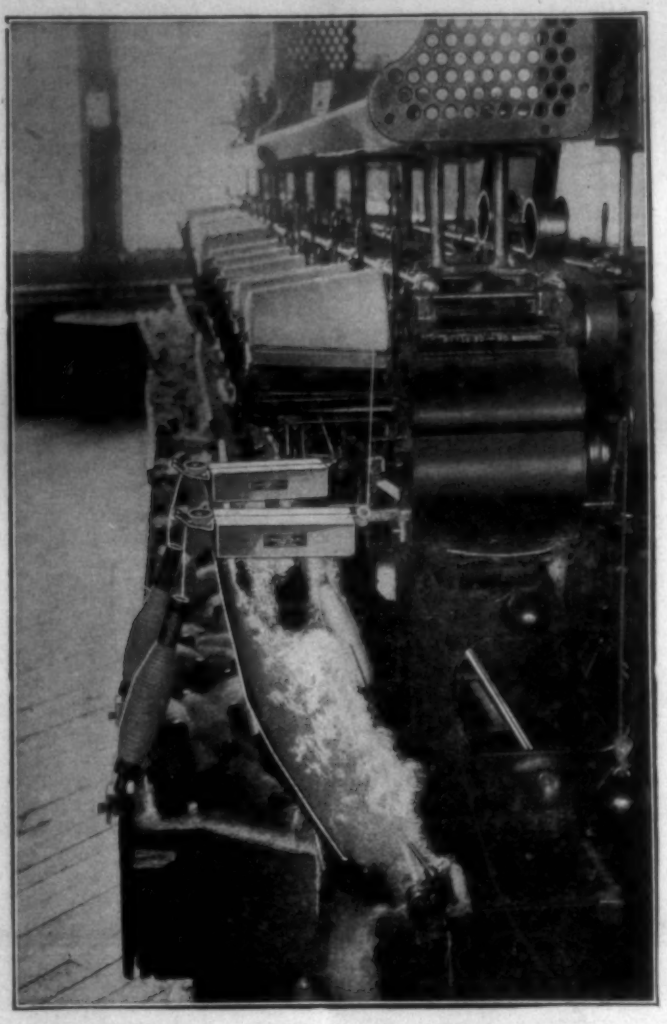
"You have a small cotton field here," I remarked.

"There is where I begin my research," Mr. McDowell replied.

This was in harmony with the ideas often expressed by Professor Thomas Nelson, head of the Textile Department, and Prof. R. Y. Winters, head of Research Department of Agronomy in State College. These two men were already carrying on certain experiments with the North Carolina fibre. "Although we had just made a beginning," said President Brooks, "I was convinced that we were moving in the right direction, and if we could bring the cotton field and the cotton mill closer together in North Carolina, through a much greater co-operation of research in textile manufacturing and in cotton production, the value to the State would be tremendous. I spent the day in Mr. McDowell"s laboratory, watching him using the microscope as he studied different fibres for special uses, manipulating the delicate machinery for testing the strength of fibres, yarn and fabrics, comparing different grades of cotton, and the amount of waste that accumulates as a result of ignorance in uniting fibres for different fabrics, testing different dyeing processes in his miniature bleachery and the effect on different fibres, etc. Immediately after returning to North Carolina, I visited a number of leading cotton manufacturers and learned that they already knew of Mr. McDowell's work and were enthusiastic over the prospects of our establishing at State College a research department with him as the director in charge."

Portuguese Textile Mills Reduce Production.

The scarcity of orders for cotton goods, which has been acute in Portugal during the last three months, continues. Mills in the Pporto district have been reducing production to a considerable extent and during the past month a number have closed down entirely, Consul Wiley, Lisbon, advises the Department of Commerce. It is estimated that from August to November, the mills as a whole operated at about 50 per cent of normal capacity. There is little indication of an early improvement. A number of mills have goods on hand, made from cotton purchased at higher prices than current quotations and at much higher exchange rates. Inasmuch as by far the greatest number of cotton mills are located in the Oporto district, this account gives a fair idea of the general situation in the whole of Portugal.



Mr. Knitter—Do You Realize Your Loss From Waste?

How often do your knitting machines stop because of slubs—heavy and light spots in the yarn?

Do you know the loss of production from this cause? Do you know the amount in dollars and cents—that is, lost in waste that is thrown under the cutter's table due to cutting out holes through the use of imperfect yarn?

Do you realize the difference in production between running good yarn and bad yarn? With labor high, even the same percentage of waste in manufacturing becomes a heavier charge against your costs. Are you taking the best means of meeting this situation?

The successful men in the production of knitted textiles are those who, under the pressure of high prices, make use of the most effective methods of avoiding waste in manufacturing operations.

A Knitter can cut down waste in his plant and increase his production by using the best grade of yarn—that is, free as possible from imperfections. If a lower grade contains even one more imperfection to the mile of 30/1, it means fourteen more imperfections to the pound—fourteen thousand more imperfections to the thousand pounds; one thousand pounds is a small quantity to the user of yarn. Fourteen more imperfections is a severe handicap in the manufacture of any product.

You can positively cut down the waste in production by equipping your winder with the Eclipse Yarn Cleaning Device. By using this cleaner, any grade of carded yarn can be made a ninety per cent better knitting yarn. You cannot appreciate this fact until after you have used the Eclipse Yarn Cleaner.

If you knit direct from cones, take this vital matter up with your "spinner"—he can deliver you a better yarn.

Ask us to send you full information—or better still—we will send our representative to give you an actual demonstration upon your request. When you write, please mention the type of winder or spooler you use

Eclipse Textile Devices, Inc.

Elmira, N. Y.

Makers of

Automatic Yarn Cleaner, Automatic Stop Motion, Yarn Tension Device
Eclipse Van Ness Dyeing Machine

Development of the Spinning Frame

(Continued from Page 10)

In contrast to the patent to Brayton, which had one band for each spindle, is the patent granted in 1855, to J. Morse, of Woonsocket, R. I. This shows an endless-belt drive, and was an early attempt to drive all the spindles of a frame with a continuous band, using only one take-up pulley. A disadvantage of this construction is that if the band breaks, a large number of spindles are rendered idle and a good deal of time is consumed in rethreading the band around the spindles. Various forms of continuous-band drives have been tried in recent years, including steel belts as well as leather belts, woven tapes, and rope drives. The continuous-belt drive is used today on the silk spinner where the load is very light.

In 1845 a patent was granted to B. Brundred, of Paterson, N. J., on a circular spinning frame with six sets of rolls, driven by an elaborate series of bevel gears. This shows to what extremes the inventors of this period went in their attempts to improve the general design. The circular principle has frequently been attempted in textile machines—the most successful, perhaps, being the Noble comber, and the knitting machines.

A later development was the ring spinning frame with the stationary ring rail and the traversing spindle rail. This was first patented by Thomas Mayor, of Providence, R. I., in 1876. He mounted the whirl on a spline so that it remained at the same height while the spindle and bobbin traversed. The chief advantage of a stationary ring rail is that the distance between the thread eye and the spinning ring remain constant. Hence the balloon remains constant, and this tends to make a more even yarn. In the case of cap spinning or flier spinning, the same result is obtained. The cap or flier remains at a constant level and the bobbin is traversed to lay on the yarn.

Many other patents have been granted on spinning frames having stationary ring rails. Those now in use include the Pease frames for spinning woolen yarns, built by the Whitin Machine Works, and the cotton spinning frames built by Potter and Johnston.

As far back as 1830 a patent was granted to Charles Danforth, of Paterson, N. J., for a cap spinning frame, which became known as the "Danforth frame." This approached the modern frames in length and number of spindles, and resembled the cotton spinning frame of the present day in the creel which held the roving, the roll stands, and the thread board with individual thread eyes; and the worsted spinning frame of the present day in the spindles, the driving cylinder, the traversing lifter plate, and finally in the cap itself.

Drawing Rolls.

One of the most important features in the mechanical handling of textile fibers is the employment of drawing rolls. The drafting of the fibers, which had formerly been done by human fingers in spinning, could now be done by machinery. It is with this invention that the successful development of the modern spinning frame may be said to have begun. Drawing or spinning rolls were the invention of John Wyatt, of Litchfield, England, and his partner, Lewis Paul, of Birmingham, but the British patent, which was granted in 1738 bears the name of Lewis Paul only.

Thirty-one years later, Arkwright used drawing rolls on his water frame. Arkwright is often given credit for originating the drawing rolls. This impression may have been caused by the familiar picture of Arkwright seated beside a table on which is a model rollstand with drawing rolls.

Lewis Paul does not mention of what material his drawing rolls were made, and whether they were covered or not. But Arkwright states in his specification that "that part of the roller which the cotton runs through is covered with wood, the top roller with leather and the bottom one fluted." Although wood has been dispensed with in the construction of drawing rolls, leather-covered top rolls and fluted bottom rolls are still employed on modern spinning frames.

The Flier.

Fliers are the spinning elements used by Arkwright. Neither the cap nor ring had been invented up to his time.

Although the flier is no longer used in spinning cotton, it is now used on cotton and silk roving frames, and on some worsted spinning and drawing frames.

The flier was invented by Leonardo da Vinci about 1519. In 1530, Johann Jurgen, of Wattenbuttel, in Brunswick, Germany, a wood carver, constructed the first flier. Fliers were made of wood for the next 300 years.

The domestic spinning wheel illustrates the early form of wooden flier. The water frame of Arkwright shows the next step. Six years later Arkwright used an automatic traverse motion and did away with the hooks.

A flier in which the yarn or roving was brought down the outside of the arm is found in a patent to J. Morgan, of Manayunk, Pa., granted in 1836. This was very much like the fliers now used on worsted and jute spinning.

The first attempt that we have been able to discover at making a hollow-arm flier (which shields the yarn or roving from the air resistance) is shown in the British patent

(Continued on Page 26)

There's One Thing We'll Never Tell About SLIP-NOT

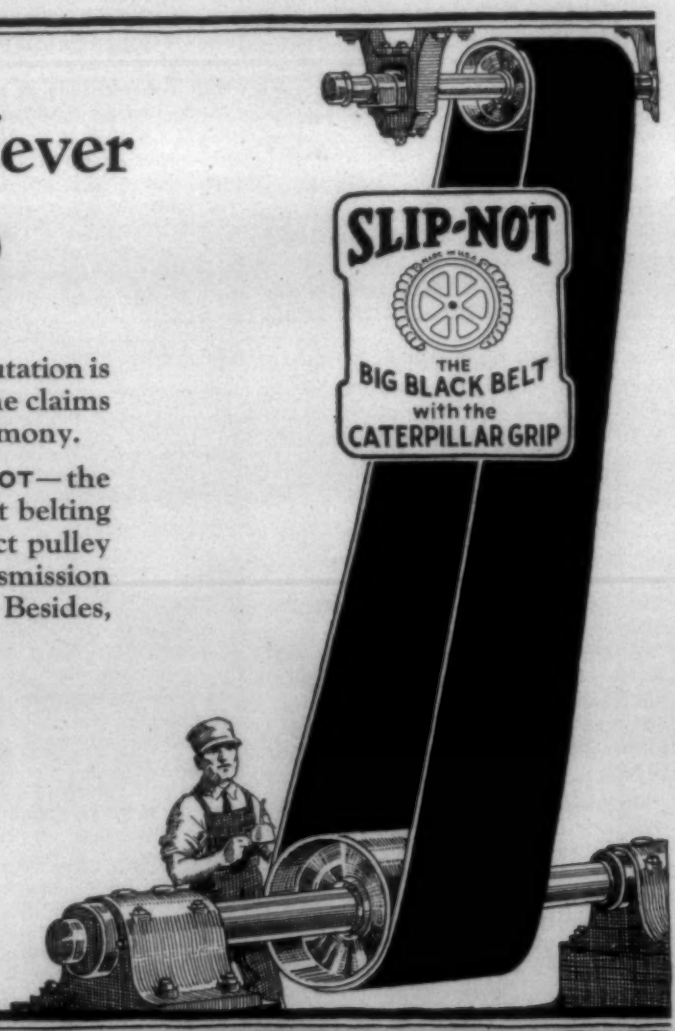
SLIP-NOT Leather Belting has made a name for itself. Its reputation is built entirely upon what it can do. You who use it know that the claims we make for it and the way it performs are thoroughly in harmony.

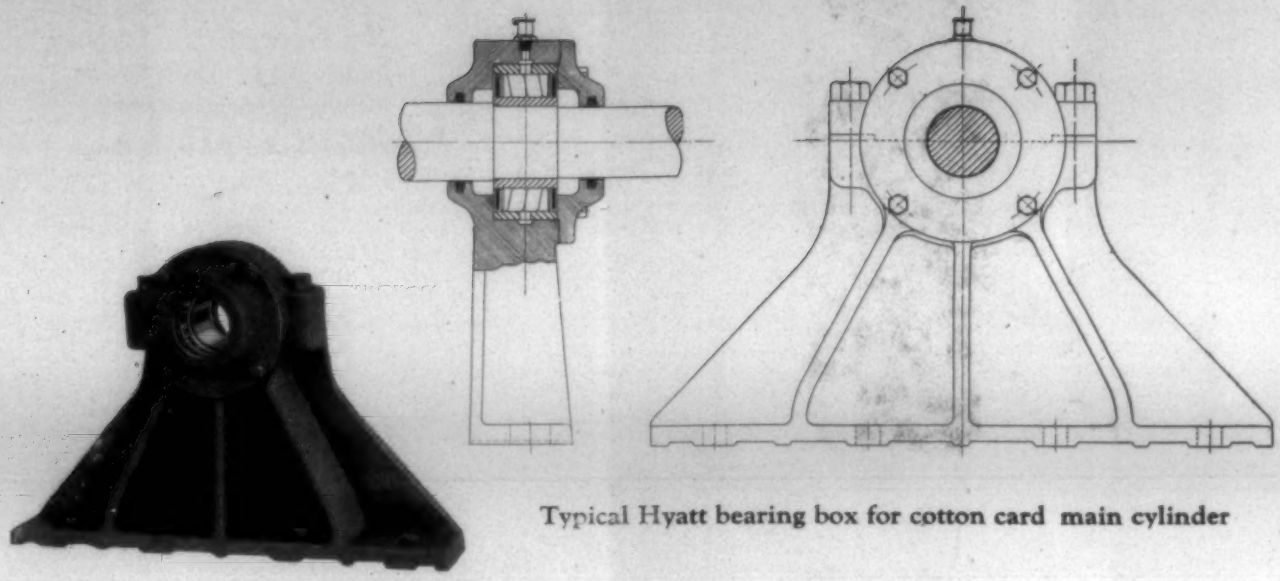
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And, after all, there is only one thing you are interested in, and that is *results*. This SLIP-NOT gives in generous measure.

Ask your dealer for SLIP-NOT *Leather Belting. If he doesn't carry it we'll be glad to tell you who does.*

SLIP-NOT BELTING CORPORATION
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Typical Hyatt bearing box for cotton card main cylinder

Better Bearings For Better Carding

THE importance of better carding has been emphasized by the textile publications and by extensive discussions at the meetings of the textile associations.

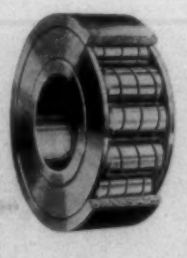
It is clear that the results of good picking are lost unless the carding operation is maintained at a high degree of perfection. It follows also that successful carding is possible only when the cylinder and licker-in settings are maintained with extreme accuracy.

That is where Hyatt roller bearings play their part, operating for years without appreciable wear and holding the shafts in true alignment without adjustment, repairs or replacement.

Nor does their usefulness end there—the distinctive construction of these bearings provides positive oil-conserving lubrication with infrequent replenishment of oil. Simple housings retain the oil so as to prevent its getting on the card clothing or product.

The elimination of plain bearing friction insures smooth uninterrupted operation and consequent increased output.

Specify Hyatt bearings when buying new cards and arrange to have them applied to your present equipment. It is a sure way to greater production of clean uniform sliver.



Write for a copy of the Hyatt Textile Bulletin. It contains information of interest on cards and other machinery.

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Lovely Foundation Plantings Turn Houses into Homes

A group of evergreens or shrubs at the foundation walls is to a house what the frame is to a picture; they give a finished appearance, and turn an ordinary house into a home. You instinctively know that the people living in a house surrounded by flowering shrubs, roses and evergreens are contented, friendly and well worth knowing.

Smiling Evergreens That Never Fade

Evergreens are peculiarly adapted to foundation plantings; they look cool in summer and warm in winter. Though they do not bloom, the great variety of color, and ever-changing foliage, provides constant interest from the time the new growths push out in the spring (like candles on a birthday cake) until the "candles" come again. Evergreens are a perpetual joy; they wear a cheerful smile that never fades. Moreover, they furnish the best kind of a background for bulbs or hardy plants that may be set among them.

Abelias, Mahonias, Ligustrums, and other broad-leaved Evergreens used close to the house, with a ground cover of Pachysandra, or other evergreen material, impart a feeling of soft, velvety richness.

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Write to us saying that you would like our ideas. We will send a representative (perhaps he is in your vicinity now) who will make suggestions and submit a plan with the cost. Upon its acceptance the evergreens, shrubs, or other needed material will be sent as soon as the season permits. Our planting gang will do the work, if you wish, and leave things in good order. A one-year guarantee goes with each job; any plants dying within that time will be replaced free at the nursery. Plant this spring.

The Howard-Hickory Co.

Nurserymen—Landscape Gardeners

Hickory, N. C.

Carding and Spinning

By George M. Ivey

Copy Revised for Third Edition.

(Continued from last week)

Reel Production Table, 10 Hours

No. of Yarn	54 Inch Reel				60 Inch Reel			
	120 Rev.	130 Rev.	140 Rev.	150 Rev.	120 Rev.	130 Rev.	140 Rev.	150 Rev.
4	12.8	13.8	14.8	16.0	14.0	15.2	16.3	17.5
5	10.2	11.0	12.0	12.7	11.4	12.2	13.3	13.7
6	8.5	9.2	10.0	10.6	9.4	10.2	11.0	11.3
7	7.3	7.9	8.4	9.1	8.0	8.8	9.3	10.0
8	6.4	6.9	7.4	7.7	7.0	7.6	8.1	8.8
9	5.4	5.8	6.6	6.7	6.2	6.8	7.2	7.7
10	5.1	5.5	6.0	6.4	5.7	6.1	6.6	7.1
11	4.6	5.0	5.4	5.7	5.1	5.6	5.9	6.4
12	4.2	4.6	5.0	5.2	4.7	5.1	5.5	5.9
13	3.9	4.2	4.6	4.8	5.3	4.7	5.0	5.4
14	3.6	3.9	4.2	4.5	4.0	4.4	4.7	5.0
15	3.4	3.7	4.0	4.2	3.8	4.1	4.4	4.7
16	3.2	3.4	3.7	4.0	3.5	3.8	4.1	4.4
17	3.0	3.1	3.5	3.7	3.3	3.6	3.8	4.1
18	2.8	3.0	3.3	3.5	3.1	3.4	3.6	3.9
19	2.7	2.9	3.1	3.4	3.0	3.2	3.5	3.8
20	2.5	2.7	3.0	3.1	2.8	3.0	3.3	3.5
21	2.4	2.6	2.8	3.0	2.7	2.9	3.1	3.4
22	2.3	2.5	2.7	2.8	2.5	2.8	2.9	3.1
23	2.2	2.4	2.6	2.7	2.4	2.6	2.8	3.0
24	2.1	2.3	2.4	2.6	2.3	2.5	2.7	2.9
25	2.0	2.2	2.4	2.5	2.2	2.4	2.6	2.7
26	1.9	2.1	2.3	2.4	2.1	2.3	2.4	2.6
27	1.9	2.0	2.2	2.3	2.1	2.2	2.4	2.6
28	1.8	1.9	2.1	2.2	2.0	2.1	2.3	2.5
29	1.7	1.8	2.0	2.1	1.9	2.0	2.2	2.4
30	1.6	1.7	1.9	2.0	1.8	2.0	2.1	2.2
40	1.2	1.3	1.5	1.7	1.4	1.5	1.6	1.8
50	1.0	1.1	1.2	1.4	1.1	1.2	1.3	1.4
60	.8	.9	1.0	1.2	1.0	1.1	1.2	1.3

Sixty per cent of the time is allowed for stops.

Reel Production Table, 10 Hours

No. of Yarn.	54 Inch Reel				60 Inch Reel			
	120 Rev.	130 Rev.	140 Rev.	150 Rev.	120 Rev.	130 Rev.	140 Rev.	150 Rev.
4	15.6	16.8	18.4	21.0	17.6	19.2	21.2	22.4
5	12.5	13.6	14.8	16.0	14.2	15.6	17.0	18.1
6	10.4	11.2	12.2	13.2	11.8	13.0	14.2	15.4
7	8.8	9.6	10.4	11.2	10.0	11.2	12.2	13.2
8	7.8	8.4	9.2	10.0	8.8	9.6	10.6	11.6
9	7.2	7.6	8.2	8.8	7.8	8.6	9.4	10.1
10	6.2	6.8	7.4	8.6	7.1	7.8	8.5	9.2
11	5.6	6.2	6.7	7.3	6.4	7.1	7.7	8.4
12	5.2	5.6	6.1	6.6	5.9	6.5	7.1	7.7
13	4.8	5.2	5.6	6.1	5.4	6.0	6.5	7.1
14	4.4	4.8	5.2	5.6	5.0	5.6	6.1	6.8
15	4.1	4.5	4.9	5.3	4.7	5.2	5.6	6.1
16	3.9	4.2	4.6	5.0	4.4	4.8	5.3	5.8
17	3.6	4.0	4.3	4.6	4.2	4.6	5.0	5.4
18	3.4	3.8	4.1	4.4	3.9	4.3	4.7	5.1
19	3.2	3.6	3.8	4.2	3.7	4.1	4.4	4.8

Reel Production Table, 10 Hours

(Continued from Preceding Page)

No. of Yarn	54 Inch Reel				60 Inch Reel			
	120 Rev.	130 Rev.	140 Rev.	150 Rev.	120 Rev.	130 Rev.	140 Rev.	150 Rev.
20	3.1	3.4	3.6	4.0	3.5	3.9	4.2	4.6
21	2.9	3.2	3.5	3.8	3.4	3.7	4.0	4.4
22	2.8	3.1	3.3	3.6	3.2	3.5	3.8	4.2
12	2.7	2.9	3.2	3.4	3.0	2.4	3.7	4.0
24	2.6	2.8	3.0	3.3	2.9	3.2	3.5	3.8
25	2.4	2.7	2.9	3.2	2.8	3.1	3.4	3.6
26	2.4	2.6	2.8	3.0	2.7	3.0	3.2	3.5
27	2.3	2.5	2.7	2.9	2.6	2.8	3.1	3.4
28	2.2	2.4	2.6	2.8	2.5	2.7	3.0	3.3
29	2.1	2.3	2.5	2.7	2.4	2.6	2.9	3.2
30	2.0	2.2	2.4	2.6	2.3	2.5	2.8	3.0
40	1.5	1.6	1.8	2.0	1.7	1.9	2.1	2.3
50	1.2	1.3	1.4	1.6	1.4	1.5	1.6	1.8
60	1.0	1.1	1.2	1.3	1.1	1.2	1.4	1.5

Sixty per cent of the time is allowed for stops.

TROUBLES IN REELING

Loose Ends.—All reeled yarn should be rigorously inspected. It is much more important than at any other point in the process of manufacture, because all the work has been put on the goods, making them, on the whole, of a good or even superior quality, and a few bad skeins may spoil a large shipment. The writer once had charge of a mill where they had a great deal of complaint and several claims on what was called "cut yarn."

(Continued on Page 28)

J. S. Roberts, President ESTABLISHED 1919 C. M. Young, Treasurer

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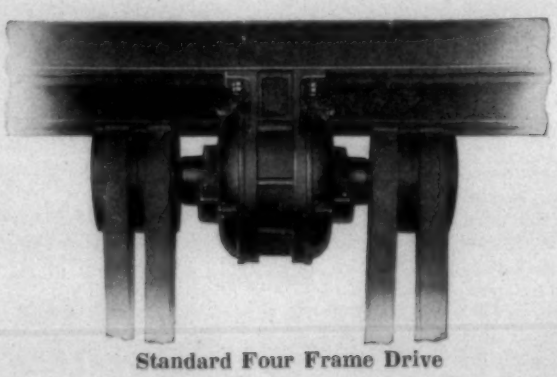
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District Offices in All Leading Cities.

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Chain Drives serve a very important purpose—they are designed to transmit power—positively; quietly, and with minimum loss.

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MAKE OF CHAIN USED_____

NAME_____ MILL NAME_____

ADDRESS _____

S. T. B. 1-15-25

Practical Discussions By Practical Men

A Dissatisfied Overseer.

Editor:

I am an overseer of carding and doing my best, but as my work does not seem to be appreciated, I am getting discouraged. I like my job all right and want to stay. What is the best way to get myself straightened out on this situation?

"South."

Your Chance for Promotion.

Editor:

I am a young man and anxious to get ahead. I am now a loom fixer but there seems to be no chance for me to get ahead right away.

Will you please advise me what is the best way to learn how to grow in the textile business and how to broaden out? Fixer.

Establishing a Small Weave Mill.

Editor:

I am an overseer of weaving and holding down a good job making fancy goods. I am thinking seriously of leaving my employer and starting on my own account a few looms and be more independent. Would like the candid advice of your readers on this all-important matter to met. "Weaver."

Warpers Causing Bad Work.

Editor:

I am in charge of a small mill away from the larger textile centers and do not see many mill men to consult regarding my mill difficulties. May I ask help through your valuable discussion page?

My work runs bad and the trouble is at the warpers. I had to speed them up to keep up to the slashers and now I get less production than I did before. What shall I do? The work went better before I speeded up, but it goes worse now. My yarn is strong and spinning runs well. "Manager."

Answer to "Cloth."

Editor:

In answer to the question on cloth analysis submitted by "Cloth" in last week's issue I want to say to him:

You have submitted a very nice piece of twilled fabric, but you must remember that it is never quite possible to secure absolutely correct figures from so small a sample. You did not mention the width, so I will base my calculation of same as being 36 inches wide. If it is wider or narrower, you can readjust the figures by following the formula below.

The sample twilled goods is a three-harness weave one up and two down.

1. The picks per inch count ... 58
2. The ends per inch count ... 108
3. The total ends and picks is 166
4. A piece 4 inches square or 16 sq. in. weighs 27 grs.
5. A square yard of cloth contains 1296 sq. inches.
6. 1296"÷16"=81.
7. A sample 4 inches square equals 1-81 of a yard.
8. 81×27 grains weight of sample equals 2187 grs.
9. There are 7000 grains in one pound.
10. 7000÷2187=3.20 yards per lb.
11. The 108 ends of warp per in. Each 4 in. long is 12 yds., wt. 4 grs.
12. There are 840 yds. of No. 1 yarn in a pound.
13. 7000÷840=weight of one yard of No. 1 yarns.
14. One yard of No. 1 yarn weighs 8 1-3 grains.
15. 12 yards of warp ends multiplied by constant 8 1-3=100.
16. 100÷4 (weight of above 12 yds.) equals No. 25 warp yarn.
17. Weight of 58 picks of filling each 4 inches long equals 6 16-100 yards and weigh 3 75-100 grains.
18. 6 16-100×8 1-3 (constant number) is 51 33-100.
19. 51 33-100÷3 75-100 equals number 18 65-100 filling.
20. If cloth is sized or starched, find out per cent of starch or size materials in cloth by washing a sample and then weighing carefully after it is thoroughly well dried. Also weigh it before washing carefully to note the difference in weight. The difference will be the starch or size.
21. If there is any starch or size in the cloth to the amount of, say, 10%, the yarn numbers will be 10% lighter.
22. Do not forget to add about 5% to allow for the take-up of the yarns in weaving. That is, the ends of yarn or thread yarn pull out of the cloth will be crinkley and although they were pulled out of the sample 4 inches square, each thread will measure when pulled out straight 5% longer or so.
23. Yarn numbers after allowing for sizing and take-up will be warp No. 28.75 and the filling will be No. 21.44.
24. Now for a good guess, make a sample piece of cloth of this description from No. 30s yarn and No. 20s filling yarn, and you will have probably proven your analysis quite accurately.
25. If, then, the weight or yards

(Continued on Page 27)

MATHIESON Chemicals

A Remedy

For One Dye House Trouble

ONE of the many possible sources of trouble in the dye house is the improper alkalies—special alkali mixtures which are seldom uniform in strength and often of unknown or uncertain composition.

For this reason the up-to-date dyer is inclining more and more to the use of straight 58 per cent Soda Ash. Being a standard basic commodity, Soda Ash has a definite known composition and a published market value. With Mathieson 58 per cent Soda Ash in his dye-bath formulas, the dyer is working with absolutely uniform alkali and can eliminate at least one source of trouble.

In many cases where the so-called modified sodas are being used, the change to straight 58 per cent Soda Ash also brings with it an immediate and substantial saving in alkali costs. For example, in preparing sulphur colors one pound of Soda Ash will do the same work as two pounds of modified soda. The desired results are obtained with half as much straight 58 per cent Soda Ash and at less than half the previous cost.

Our technical staff will be glad to demonstrate these facts at any time to interested textile men.

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New Government Specifications on Denim

Washington, D. C.—New specifications on blue denim, unshrunk and shrunk for the United States Government, were officially promulgated by the Federal Specifications Board last month, for the use of the departments and independent establishments of the Government in the purchase of blue denim. The latest date on which the technical and inspection requirements of these specifications shall become mandatory is March 6, 1925. They may be put into effect, however, at any earlier date, after promulgation.

Those relating to denim are No. 256 for shrunk and No. 257 for unshrunk. Details follow:

Types.

1. The types of denims purchased under this specification, as may be specified in the proposal, are:

1. Whiteback.—The warp shall be blue and the filling shall be white.

2. Mock Twist.—The warp shall be blue and the filling shall be formed by combining one white roving and one black roving prior to the spinning operation.

3. Pin Stripe.—The warp shall be blue with a white stripe consisting of two white yarns occurring every one-sixteenth of an inch. The filling shall be blue.

4. Hickory Stripe.—The warp shall be blue with a white stripe consisting of four white yarns occurring every one-fourth inch. The filling shall be blue.

5. Express Stripe.—The warp shall be formed of alternate stripes of blue and white yarns one-fourth inch wide. The filling shall be white.

6. White Stripe.—The warp shall be blue with a white stripe consisting of two white yarns occurring every one-half inch. The filling shall be black.

Material and Workmanship.—The denim shall be made of cotton thoroughly cleaned and free from dirty and oily waste. It shall be evenly woven and shall be free from an excessive number of avoidable imperfections of manufacture.

General Requirements.—The colors as specified shall be identical with the standard samples obtainable on request, and if not obtainable shall be that commonly accepted as commercial practice. A 36-inch width is sometimes required instead of the standard 28-inch width. This change should be specifically stated in the proposal.

Retail Requirements.

1. Finish. — The shrunk denim when submitted to the shrinkage test shall not shrink more than 2 per cent in either warp or filling direction, respectively.

The unshrunk denim when submitted to the shrinkage test shall not shrink more than 8 per cent in the warp direction and not more than 3 per cent in the filling direction.

2. Weave.—The weave shall be a 3-harness twill (2—1), or 4-harness twill (3—1) as specified in the proposal. If not specified, 3-harness twill shall be furnished.

3. Thread Count. — The thread count shall be as given in the requirement table. No minus tolerance will be allowed.

4. Width.—The average width of each roll shall be 28 inches if not otherwise specified. A tolerance of plus or minus one-fourth inch will be allowed for both 28 and 36-inch widths. (See General Requirements.)

5. Weight—The weight per square yard shall be as given in the requirement table. A tolerance of plus or minus 2½ per cent will be allowed.

6.—Breaking Strength.—The minimum breaking strength shall conform to the amounts specified in the requirement table, as determined by the 1 by 1 by 3-inch grab method. No minus tolerance will be allowed.

7. Length of Roll.—The roll of finished cloth shall contain 50 to 60 yards and for a double roll 100 to 110 yards. No length under 40 yards shall apply.

8. Color Fastness.—All blue threads shall be dyed with indigo. The color shall show good fastness to light, washing and water, and shall not show an excessive degree of crocking.

9. **Requirement Table.**

No.	Weight Per sq. yd. oz.	Weight Per lin. yd. 28-in. wide oz.	Yards Per lb. 28 in. wide	Threads per inch Minimum Warp.	Threads per inch Minimum Filling.	Minimum Breaking Strength 1x1x3 in. grab Warp. lb.	Minimum Breaking Strength 1x1x3 in. grab Filling. lb.
1	8.6	6.66	2.40	60	36	140	50
2	9.3	7.27	2.20	65	40	150	60
3	10.3	8.00	2.00	70	40	155	65
4	11.4	8.89	1.80	75	44	160	70

Method of Inspection and Tests.

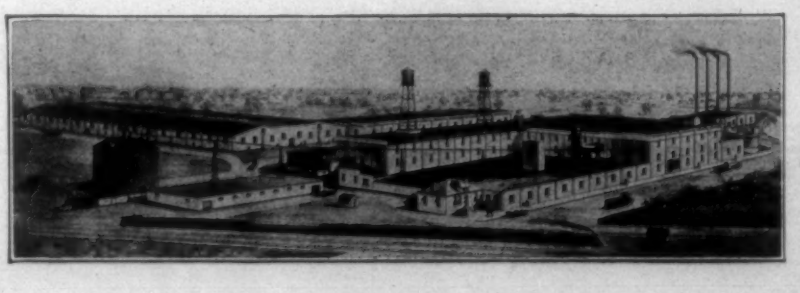
V. 1. Sampling.—From every delivery of 200 yards or fraction thereof, a sample approximately 18 inches long and the width of the cloth shall be cut for test purposes.

2. Atmospheric Conditions.—Test may be made under prevailing atmospheric conditions except in the settlement of disputes concerning weight and strength. Such tests shall then be made upon material having normal moisture content, obtained by exposure for at least four hours to an atmosphere of 65 per cent relative humidity at 70 degrees Farenheit.

3. Breaking Strength (1 by 1 by 3-inch Grab.)—Six test specimens 6 inches long by 4 inches wide shall be cut, three in the direction of the warp and three in the direction of the filling, respectively. Care shall be taken that no two test specimens include the same threads, except for re-test as specified below. No sample for testing should be taken at less than 8 inches from either selvedge.

The machine used shall be of the inclination balance type. The minimum capacity of the machine shall be 300 pounds. The lower jaw shall travel at a uniform rate of 12 inches per minute under no load. The distance between jaws shall be 3 inches at start of test. The inside or back

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COLUMBUS, OHIO

DANIEL H. WALLACE, Southern Agent, Greenville, S. C.

C. B. ILER, Greenville, S. C. L. J. CASTILE, Charlotte, N. C.

half of each jaw shall be 2 inches or more in width; the other half shall be 1 inch in width. Jaws shall have a smooth and flat surface with edges slightly rounded to prevent cutting. The results of the test of each direction shall be averaged. If a specimen slips in the jaw, breaks in the jaw, breaks at the edge of the jaw, or for any reason due to faulty operation the result falls markedly below the general average, the result shall be disregarded, another specimen taken from the same threads, and the result of this break included in the average.

4. Fastness to Light. — Expose specimen to the action of an ultra-violet light for 36 hours. Compare with original sample and classify as good, fair, or poor fastness to light.

5. Fastness to Washing.—Prepare a 1 per cent neutral soap solution. Heat to about 50 degrees C. Immerse the specimen and stir with a glass rod for several minutes. After the sample has remained in the solution 10 minute, remove and rinse. Hang in air until dry. Compare with the original sample and classify as good, fair, or poor fastness to washing.

6. Fastness to Water.—Immerse a specimen in clear water. After one hour remove and dry in the air. Compare with the original sample and classify as good, fair, or poor fastness to water.

7. Crocking.—The degree of crocking when rubbed with a piece of white cotton cloth both when wet and dry shall be compared with the results obtained using the standard sample, if this is available.

8. Shrinkage. — Take a specimen approximately 12 inches square from the sample. Within this specimen with indelible ink mark off exactly a 10-inch square with edges parallel to the warp and filling directions, respectively. Wet thoroughly in water for one hour, allow to dry in air, and measure the marked-out portion.

Julius Cone Discusses Situation

Greensboro, N. C.—"It is going to be a case of the survival of the fittest," Julius W. Cone, of the Cone Export and Commission Company, here, operating the White Oak and Proximity Mills and Proximity Print Works, in referring to conditions in the textile world. He made the statement at a meeting of the local Rotary Club.

Mr. Cone said that the cotton mill owners are in the poorest position of any of the manufacturers to face the year 1925. He explained that "after the war demand for all cotton manufactured we in a way forgot ourselves and started new mills regardless. Old mill machinery that had been practically junked was piled at the ports for export to Japan. This country, Japan and India had been reaping the war harvest in the cotton business."

He further stated that the textile industry was not so badly affected as business in general for a while, but by 1920 the effect of a "false position" was felt. Added to domestic competition, he said, was high cost of raw material and high cost of labor. Foreign countries are now producing heavily, he continued, and export business falls off. Other reasons given by Mr. Cone for textile depressions are that American mills are consuming half the American crop, 5,500,000 bales to 6,000,000 bales, and rely mainly upon 110,000,000 toto 120,000,000 people, whereas the mills consuming the other half have 400,000,000 or 500,000,000 customers. But for the other industries that have become consumers of cotton, American mills would be in worse condition, Mr. Cone said, "since the lady now wears hardly any cotton and there is much less of it in men's clothing. We shall have to work and struggle and the fittest mill survive. Those who are in a position to command credit will try to run full time and keep their people employed."

Textile Gains Are Reported

Washington.—Improvement first noted in the textile industries last summer continued during November and December, according to reports to the Federal Reserve Board. Buying was active, the board observed, with considerable ordering for future delivery, and prices were either firm or advancing. Employment showed an increase among manufacturers of fabrics and knit goods, but seasonal declines were noted in clothing.

Cotton goods markets were fairly active during December, which is ordinarily a month of light buying, the board stated. Raw wool prices have moved up steadily since last summer and in December approached close to the miximum reached in the spring of 1920. Buying of woolen and worsted goods has been fairly active, but the board adds that this is the usual quiet season, as fall poenings are expected some in January.

Some recessions were noted in the raw silk market during the last week in November and the first week in December. Buying was less active and prices fell, but in the following weeks an upward reaction occurred. Knit goods, according to the board's reports, have been fairly active in recent weeks and mills have been operating at a higher rate than a few months ago.

Cotton Mill Workers Banquet at Gastonia.

Gastonia.—The executive superintendents, overseers, second hands and master mechanics of Spencer Mountain, Ranlo, Modena and Hardin Mills held their annual banquet here Saturday vening in the Men's Bible class room of theh First Baptist Church.

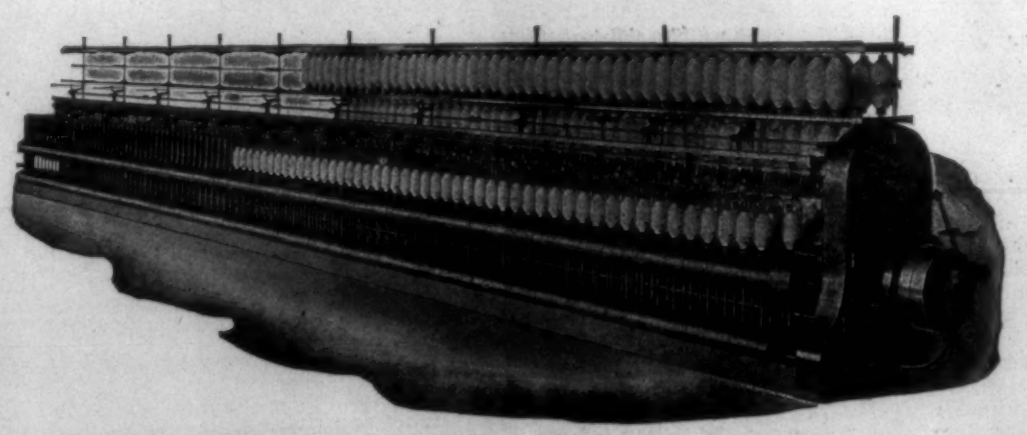
An elaborate supper was the center of interest and was folowed by a varied and inspiring speaking program.

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SOUTHERN TEXTILE BULLETIN

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He'd better look behind him, or he'll lose something he'll never get back

Farm Journal Philadelphia.

California Ratifies

CALIFORNIA ratified the Child Labor Amendment on January 8th and its method of ratification is the best argument against the amendment itself.

If the people of California had been allowed to vote upon the amendment they would have overwhelmingly defeated same but a loud voiced well organized minority put the pressure upon the Legislature and with steam roller tactics drove the amendment through.

A few days before the amendment passed California papers said:

> "Delegates representing 250,000 women of California will storm the capital January 7th as a demonstration in behalf of the Twentieth Amendment to the United States Constitution.
>
> "The anti-child labor workers include the Federation of Women's Clubs, the W. C. T. U., parent-teachers' organizations, business and professional women."

Having an example of the power of an organized minority to force legislation, not desired by the people, though a Legislature the advocates of the measure are loudly contending that Congress can be depended upon not to enact any law not desired by the people.

All members of Congress from Massachusetts voted for the amendment and yet the people killed it 700,000 to 247,000 at a referendum, but they still contend that members of Congress can always be depended upon to vote just as the people wish.

The result in California had been predicted by the New York World and was anticipated. It was one of the ten States that we expected to ratify and we believe that it will be followed this week by Arizona and New Mexico but after that the States that ratify will be few and far between and their total will not be more than ten.

A referendum is assured in New York and New Jersey and when the people vote they will defeat the centralization scheme. Illinois and Wisconsin are also considering referendum but the advocates of the amendment are fighting desperately to defeat the move because their only hope of success is in a Legislature yielding to minority pressure.

They are opposed to allowing the people of a State to say whether or not they desire to surrender their reserved powers to the Federal Government.

At a very early date there will be three more rejections and before a great while we will have the thirteen rejections needed to defeat the amendment.

We will not stop there, however, for counting five States that do not meet this year we can depend upon approximately thirty rejections and the Twentieth Amendment is going to be the most badly defeated measure ever submitted to the States.

Governor Richardson of California

A splendid example of the desire of politicians to seek favor with the women voters is shown by the following statement of Governor Richardson of California two days before the Child Labor Amendment was ratified:

> "Governor Richardson informed Mrs. Wallace that he doesn't propose to allow 'those three whelps,' referring to Senator J. M. Inman, Herbert C. Jones and Daniel C. Murphy, Progressives, to introduce the ratification resolution in the Senate. Rather than have this happen he said he would withhold presentation of the necessary documents from Washington until March."

Attacked by Senator Walsh

THE senior Senator from Montana. Mr. Walsh, paid his respects to us in a speech in the United States Senate last week, the basis of his attack being that we had distributed literature against the Child Labor Amendment.

The object in making the speech was to have a document that could be distributed at Government expense by the frank of Senator Walsh and to deceive the people into having respect for its statements by reason of the fact that it is a Government document.

Distributing literature in behalf of the amendment at Government expense is to Senator Walsh a perfectly legitimate undertaking, but according to his assertions it was a high crime for us to distribute under postage any literature against the amendment.

He talked about our deceiving the farmers but never dared point out any false or erroneous statement contained in any of our literature.

As citizens of the United States we have a right to distribute any literature that it suits us to distribute and it is a shame that having committed no crime or improper act, we have to submit to abuse and insinuations.

Senator Walsh is exceedingly friendly with Miss Grace Abbott, chief of the Children's Bureau, and from the many "catty" remarks contained in his address we have a well founded belief that she wrote or assisted in writing his speech for him.

We have distributed literature exposing the deceit and misrepresentation of those who seek to grab the powers of the States and we do not care who knows it.

They dare not answer our literature while seeking to create the impression that we have acted improperly.

The speech of Senator Walsh was but the wail of a bad loser.

Our Discussion

WE have made arrangements with an experienced manufacturer to answer questions asked on our "Practical Discussion" page and hope to greatly revive interest in such discussions.

Many years ago, long before the editor of this journal was connected with a textile paper or the Southern Textile Bulletin was born, the discussion page of the old Southern and Western Textile Excelsior was a matter of live interest throughout the industry.

They offered prizes for the best and most articles contributed each year and our editor won second prize one year.

If we remember correctly the year our editor won second prize, the first prize was won by W. P. Hurt, who is now overseer of carding at the Deep River Mills, Randleman, N. C. There were a number of others who were regular contributors to the discussion page of the old Textile Excelsior (now deceased) but we can not now recall the names.

We realize the value of a live discussion page and want our friends to help make our page the equal of anything of the past.

An Impudent Amendment.

When the boys of America are denied wholesome apprenticeship at such time as they want it, out of school hours, we shall be turning the clock backward. It is unthinkable that the Legislatures of the States will ratify such an impudent and stifling proposal as the Child Labor Amendment.—Three Rivers (Mich.) Commercial.

FRANK B. KENNEY
President

CLARENCE R. HOWE,
Vice President

MARSHALL F. CUMMINGS,
Treasurer

T. C. Entwistle Company

Lowell, Massachusetts, U. S. A.

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Slasher Warpers,	**Balling Machines,**	**Doubling Machines,**
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Equipment not in perfect order is really "Sugar Coated Poison" as far as production is concerned. Put your plant in order! You will at least make a saving in place of an expense.

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VAT PRINTING BROWNS

Ponsol Brown G Double Paste For Printing
Ponsol Brown R Double Paste For Printing

These two vat browns have been especially prepared for the printing of all types of cotton goods.

The fact that these shades may be used alone or in combination with other members of the Ponsol series makes possible the production of a wide range of desirable colors having extreme general fastness properties.

E. I. DUPONT DE NEMOURS & CO., Inc.

Dyestuffs Department

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Taking a Chance It's Just as Good

The Northrop Loom was the pioneer automatic loom. Its success brought a complete revolution in the Textile Industry. It also brought imitators.

The Northrop Loom has proven a money-maker for the mill, a benefactor of the worker. It has been equal to the demands of every new weave for which it was purchased.

The man who buys imitations "hopes" they will prove "just as good."

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You get these advantages
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Lestershire Vulcanized Fibre Spools

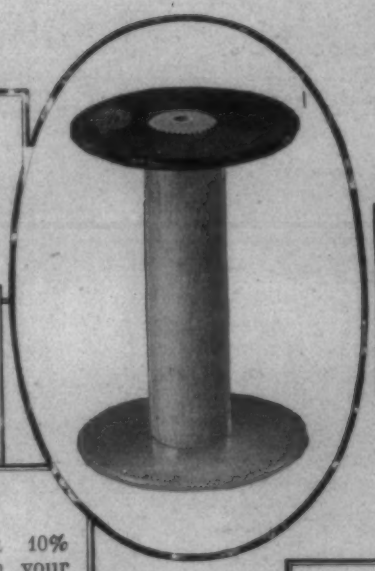
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Eliminate your spool replacement expense.

Eliminate loss of yarn due to spools. This loss runs into thousands of dollars in many mills.

Eliminate all possibility of injury to employees from rough or slivered spools. Eliminate spooler kinks and knots due to spools.

Increase about 10% the yardage on your spools.



Eliminate broken ends on your warpers due to spools and thus increase warper production 20% to 30%.

Materially improve the quality of your warps.

Improved warp-quality betters the quality and increases the production in your weave room.

The use of Lestershire Vulcanized Fibre Spools is a mill economy. Inquiries are invited regarding the savings to be expected through their use in your own mill.

Unconditional Guarantee

Lestershire **Vulcanized** Fibre Spools are guaranteed unconditionally.

LESTERSHIRE SPOOL & MFG. CO.

Also Manufacturers of High Grade Wooden Spools of Every Description

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Johnson City, N. Y.

Southern Office
519 Johnston Bldg., Charlotte, N. C.

Personal News

J. J. Pressley has become overseer of night carding at the Clara Manufacturing Company, Gastonia, N. C.

Claud Simpson has resigned as overseer weaving at the Brookford Mills, Brookford, N. C.

Chas. T. Christian has been appointed superintendent of the Liberty Cotton Mills, Dallas, Ga.

A. O. Colquitt has resigned as superintendent of the Liberty Mills, Dallas, Ga.

W. I. Craton has resigned as overseer carding at the Liberty Mills, Dallas, Ga.

Lee Denton has resigned as night overseer of carding at the Ruby Cotton Mills, Gastonia, N. C.

A. L. Pickard has resigned as superintendent of the Wennonnah Cotton Mill, Lexington, N. C.

T. B. Stevenson has resigned as general manager of the Henrietta Mills, Henrietta, N. C.

W. E. McKinney has resigned as overseer carding and spinning at the Banning Cotton Mills, Banning, Ga.

Seaborn Bridges has resigned as overseer spinning at the Crystal Springs Bleachery, Chickamauga, Ga.

L. D. Jones has been promoted to overseer winding department of the Cherokee Spinning Company, Knoxville, Tenn.

C. L. Melton has been promoted from second hand to overseer warping and designing at the Pomona Mills, Greensboro, N. C.

S. L. McCracken, superintendent of the Steele Mill, Rockingham, N. C., is undergoing treatment at the Presbyterian Hospital, Charlotte.

L. A. Lippard, of Lincolnton, N. C., has accepted the position of overseer spinning at the Hanover Thread Mills, Gastonia, N. C.

J. P. Miller, formerly superintendent of the Cherokee Spinning Mills, Knoxville, Tenn., is now acting as mechanical foreman of that mill.

R. V. Hoffman has resigned as overseer carding at the Seminole Mills, Gastonia, N. C., to accept a similar position at the Ruby Cotton Mills, of the same place.

T. A. Smith has resigned as night superintendent of the Dunn Manufacturing Company, Gastonia, N. C., to become overseer spinning at the Flint Manufacturing Company, of the same place.

A. J. Ward has resigned as overseer spinning and twisting at the Mill No. 1 of the Newnan Mills, Newnan, Ga., and accepted a similar position at the Wahoo Manufacturing Company, Sargent, Ga.

Walter Lineberger has been promoted from section man to night overseer of spinning at the Dunn Manufacturing Company, Gastonia, N. C.

P. P. Adams has been promoted from section hand in carding to overseer of night carding at the Dunn Manufacturing Company, Gastonia, N. C.

F. C. Mosteller has been promoted from overseer spinning on the day run to night superintendent of the Hanover Thread Mills, Gastonia, N. C.

E. E. Dickert has resigned as overseer of weaving at the Aragon-Baldwin Mills, Rock Hill, S. C., to enter the mercantile business at that place.

J. S. Bascon has resigned as card grinder at the Arkwray Mills, Gastonia, N. C., to become overseer of carding at the Seminole Mills, of the same place.

C. H. Lockman, of the Union-Buffalo Mills, Union, S. C., has accepted the position of superintendent of the Henrietta Mills, Caroleen, N. C.

Alex. Roberts, who for 15 years was with the Southside Mills, Winston-Salem, N. C., has accepted the position of superintendent of the Wenonnah Mills, Lexington, N. C.

Robert Fisher has been promoted from overseer carding and spinning to superintendent of the Crescent Spinning Company, Belmont, N. C., succeeding the late C. E. Tucker.

Ike Ballard has been promoted from overseer spinning at the Climax Spinning Company, Belmont, N. C., to superintendent of the National Yarn Mills, of the same place. He succeeds the late C. E. Tucker.

B. W. Bingham has not resigned as superintendent of the Prendergast Cotton Mills, Prendergast, Tenn., as reported through error last week. J. I. Cain, who was erroneously reported as having become superintendent of this mill, is acting as representative of S. W. Duggan, receiver for the Prendergast Mills.

C. T. Lassiter With Penick & Ford.

C. T. Lassiter has accepted a position as traveling representative for Penick & Ford, Ltd., Cedar Rapids, Iowa, manufacturers of the well known Douglas textile starches. Mr. Lassiter has been associated with the Southern textile industry for the past ten years and is familiar with the requirements of his new position. He will make headquarters at Greensboro, N. C., his office being under the Southern office at Greenville. Guy L. Morrison, of Greenville, is Southern representative for Penick & Ford.

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Your Selling Agent
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They mean re-orders
and building up Good-will.

Tests will show that
Solozone-bleached goods
Are strongest and stay so.

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To produce unequalled goods.

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NEW YORK CITY

Artificial Silk

This is comparatively a new material for fabric making but is rapidly growing in favor for mixed fabrics, especially with cotton mills on all sizes of average numbers, fine and coarse. The artificial silk yarn is so different from yarn of any other material that it requires special attention to the harness-eye in order to make a satisfactory fabric.

From the very first, when this new material began to be used, we have been making heddles for artificial silk yarns and have continued to improve and perfect the harness-eye until now it is generally conceded that any mill, whether making cotton, silk or other fabrics, can without hesitation depend upon our artificial silk loom harness to make a fabric with entire satisfaction. And the beauty of it is that these heddles are interchangeable for use on cotton, silk, and yarns of other material just as well.

STEEL HEDDLE MFG. CO.

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"Duplex" Loom Harness—complete Frames and Heddles fully assembled
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Drop Wires
Nickel-Plated
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Improved Loom Reeds
Leno Reeds
Lease Reeds
Combs

MILL NEWS ITEMS OF INTEREST

Charlotte, N. C.—The Magnolia Mills, which have been idle for some months, have resumed operations.

Plainview, Tex.—H. S. Hilburn is interested in the organization of a company to build a cotton mill here and wants prices of mill machinery.

Shelby, N. C.—Actual construction has been started upon the building of the new Ora Cotton Mills being erected by John R. Dover and associates.

Marion, N. C.—The McDowell Hosiery Mills, Inc., has been dissolved as a corporation. The plant will hereafter be operated by C. F. James at the Elizabeth James Mills No. 2.

Hemp, N. C.—Actual operations have been begun by the County Moore Mills. The plant has 250 looms for making fine and fancy goods and has just been completed.

Lawndale, N. C.—Fire last week seriously threatened to destroy the plant of the Cleveland Mill and Power Company. The damage amounted to several thousand dollars.

Memphis, Tenn.—It is understood that the Chickasaw Thread Company, recently organized here by Fred S. Dean, president, and R. A. Lawton, treasurer, will soon begin construction of a mill here. Offices are at 610 South Main street.

Canton, N. C.—The Crescent Manufacturing Company, recently incorporated here, takes over the plant of the Crescent Manufacturing Company, a knitting mill, which has been operated as a branch of the Crescent Manufacturing Company, of Spartanburg. The new corporation was formed to avoid payment of taxes in both States.

Gaffney, S. C.—The Sultrene Mills, capital stock $10,000, have been incorporated by J. W. Boland and R. A. Dobson. The company will install machinery for the manufacture of hosiery. Mr. Boland was formerly superintendent of the Gaffney Knitting Mills, which were destroyed by fire some months ago and which have not been rebuilt.

Macon, Ga.—The Manchester Manufacturing Company has been purchased by George W. McCommon and E. B. Murray, the purchase price being reported at about $500,000. The sale was made by Andrew Lyndon, guardian of W. A. Crutchfield, owner of the mill. Mr. Crutchfield has been an invalid for some time.

The name of the mill has been changed to the Atlantic Cotton Mills. Mr. McCommon will be president and Mr. Murray secretary-treasurer. The mill has 11,908 spindles and is operating on full time.

Asheboro, N. C.—The Parks Hosiery Mills, which was incorporated last week by Hugh Parks and associates, as noted, will erect a building, two stories, 100x60 feet, and install 50 knitting machines for the manufacture of hosiery. The building will have room to accommodate an additional 50 machines at a later date.

San Marcos, Tex. — Construction work is being rapidly pushed on the new mill being erected here by the Planters and Manufacturers Cotton Mills, of San Antonio. The main mill will be 300x122 feet, two stories and basement, concrete construction. The plant will have 10,000 spindles and 275 looms for making shirtings. M. L. Diver, of San Antonio, is the engineer.

Abbeville, S. C.—The committee working in conjunction with a New England mill company that proposes to build a new mill here has outlined details of construction for the proposed $1,500,000 plant. It is estimated that the building and village will cost $750,000, and a proposal has been advanced that a construction company be secured to erect the buildings at a cost to be approved by Lockwood, Greene & Co., the firm to accept bonds in payment to a total of 70 per cent of the value of the mill building and 75 per cent village, the remainder to be subscribed locally. Dr. F. E. Harrison is chairman of the committee.

Asheville, N. C.—Actual construction on bleachery to be erected near this city by the Sayles Finishing Plants will be under way within the next few weeks, it is stated by Haywoody Parker, local attorney.

Mr. Parker is in receipt of a letter from K. F. Wood, president of the Sayles concern. Mr. Wood is expected in Asheville in the near future to confer with local authorities with regard to start of immediate construction.

J. E. Sirrine, of Greenville, S. C., engineer, has practically completed the plans. Surveyors have been on the property for some time, making preliminary surveys and preparing for engineers to begin work.

The site was purchased for $60,000. The Sayles people plan to expend around $2,000,000 on the entire project, it is said.

Greensboro, N. C.—The Proximity Manufacturing Company, Greensboro, N. C., have just put into operation at their Proximity Mill a new steam power plant, which is highly efficient and modern in every respect.

Steam is furnished by a 770 H. P. Stirling boiler, fired by Sanford Riley stokers and equipped with Diamond soot blowers.

Coal is elevated from the trestle pit by a Link Belt skip hoist into 200-ton bunkers, whence it is fed by gravity into a weighing lorry which deposits it in the stoker hoppers.

The plant is equipped with Allen Sherman Hoff ash hoppers and has an M. W. Kellogg radial brick chimney.

The generating unit is a 1,000 K. W. General Electric three-stage extraction type turbine, with a C. H. Wheeler surface condenser.

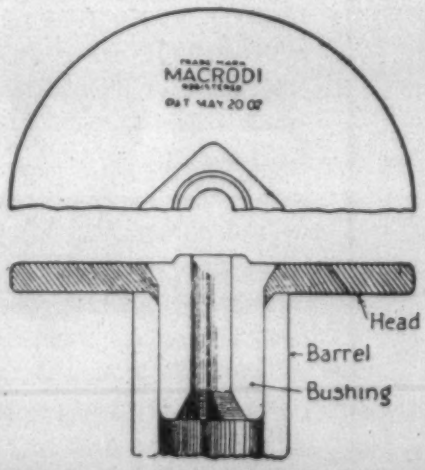
This plant is to furnish power for driving part of the mill with 550-volt, 60-cycle motors, and is the first step in changing over the entire mill from 40-cycle to 60-cycle current.

Steam is extracted from the turbine between the first and second stages at 15 pounds pressure up to a maximum of 36,400 pounds per hour at full load for use in dyeing and other manufacturing processes. This method of operation offers very attractive possibilities in power generation for plants requiring large quantities of steam for process work.

J. E. Sirrine & Co., Greenville, S.

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Sewerage—Sewage Disposal—Water Supply—Streets
VILLAGE PLANNING
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The Macrodi
FIBRE HEAD
WARP SPOOL
after fourteen years of the hardest mill use has demonstrated that it is
Durable—Economical
Write for particulars of the added traverse with corresponding increase in yardage—an important feature of this spool.
Prompt deliveries in two to three weeks after receipt of order.
MACRODI FIBRE CO.
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Members American Society Landscape Architects
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Complete Topographic Surveys
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Largest Landscape Organization in the South

C., are the engineers for the power plant and on other work for the Proximity Manufacturing Company, who are the world's largest manufacturers of denims.

$4,000,000 Du Pont Fiber Silk Plant Nearing Completion.

Nashville, Tenn. — Construction work on the new $4,000,000 mill of the Du Pont Fiber Silk Co. at Old Hickory powder plant, 15 miles from Nashville, is rapidly nearing completion. According to representatives of the company, the plant will be given the first test within about 10 days, and several weeks will be required to get the plant in smooth operation. This plant represents completion of only one unit of the company's project. About 900 operatives will be employed in this unit when it gets into operation.

The plant will represent the latest process in the manufacture of artificial silk. The building of the plant was delayed about one year in order to permit representatives of the company to go to France and make the most complete investigation of fiber silk manufacture.

When the first unit is completed it is stated that work will begin immediately on a second unit of equal size. About 1,100 men have been engaged in building the first unit. It is stated that building the second unit will be speeded up, and will be completed in much shorter time than the first.

Textile Wages Reduced for New England Mills.

New Bedford, Mass. — The New Bedford Cotton Manufacturers Association voted to reduce wages in the cotton mills 10 per cent, the cut to become effective January 14.

The reduction will affect approximately 40,000 operatives in this city alone. Following the announcement of the pending cut, a union official stated that the various labor organizations will call meetings of their members within the next few days to vote upon the question. Each union will report the result of its meeting to the textile council, the governing body of the labor organization which in turn will report the final outcome to the cotton manufacturers' association.

At present the mills are operating on a scale that is 80 per cent normal. This is said to be 10 per cent better than the scale on which they were operating last May.

Reply on Cotton Tariff.

An increased tariff on fine cotton goods would result in domestic manufacturers raising their prices and letting the public pay the bill, Henry F. Westheimer, chairman of the importers' group of the Converters' Association of New York, said in replying to a recent statement of Morgan Butler, president of the National Cotton Manufacturers' Association. Mr. Butler had said that the tariff of 1922 had proved inadequate for the protection of New Bedford mills.

"Adequate protection for New Bedford mills by prohibitive rates means exclusion—then the domestic manufacturers can raise their prices and the public pay the bill in full," said Mr. Westheimer.

"The importers of cotton goods do not demand an unreasonably low tariff and base their success on superior workmanship and their ability to introduce new fabrics which meet the public demands. Until New Bedford becomes educated to the real problem they will continue to look for protective class legislation as a cure-all for inadequacy of organization."

LOOM STRAPPING

Check Straps-- Hold-ups--

Lugs, Binder Straps--
folded and stitched, cemented—
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We specialize and know your looms.
Ask your jobber.

The Druid Oak Belting Co., Inc.
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Put Your Problems up to the Originators, Pioneers and Leaders in the Field

Write for Illustrated Literature

TIME sternly tests both men and the things men make—Through sixty years' practical demonstration of their worth, Klauder-Weldon Machines have won unqualified preference in the foremost textile plants of the United States and Europe.

Dyeing Bleaching Scouring Machines
for Skeins Raw Stock Garments

KLAUDER-WELDON MACHINE CO.
Bethayres, Pa.

For Sale

1 lot of 16 Gordon Hay Cleaning Machines. 45"—3 section, with hopper feed. In whole or in part. At a sacrifice. Maginnis Cotton Mills, New Orleans, La.

ARTESIAN WELLS
27 Years' Experience
9 Complete Rigs Operating Every Southern State
Virginia Machinery & Well Co., Inc.
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COTTON DEPARTMENT
W. M. RATTAN, Manager
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Chickasha——Oklahoma
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WELL DRILLING AND DEEP WELL PUMPS

We do the engineering, and have had 32 years experience solving water problems satisfactorily for textile mills.

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Richmond, Va.

WE BUY FOR SPOT CASH

Surplus and Odd Lots of Chemicals

Oils, Dyes, intermediates, solvents, gums, glues, waxes, and any item of a chemical nature.

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THE CHOICE OF A HUMIDIFYING SYSTEM

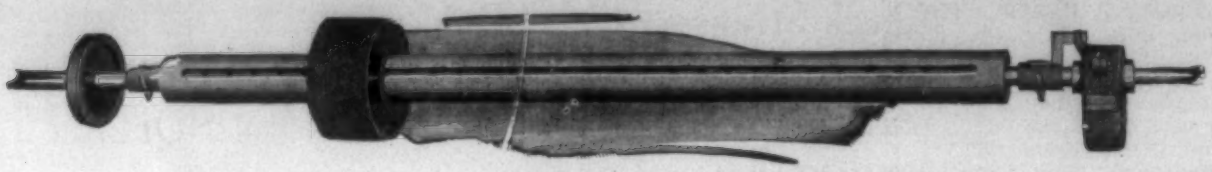
must be one that for simplicity with great capacity and economy in maintenance produces uniformly such conditions that may be determined for the different requirements of the work. In the American Moistening Company's method of humidifying, all such requirements are GUARANTEED

Our COMINS SECTIONAL HUMIDIFIERS
Our FAN TYPE and HIGH DUTY HUMIDIFIERS
Our VENTILATING Type of Humidifier (Taking fresh air into the room from outside)
Our ATOMIZERS or COMPRESSED AIR SYSTEM
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Our CONDITIONING ROOM EQUIPMENT
Our AUTOMATIC HUMIDITY CONTROL (Can be applied to systems already installed)
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Are all STANDARDS OF MODERN TEXTILE MILL EQUIPMENTS

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SPECIALISTS 1868---1925 57 YEARS

TEXTILE GRINDING MACHINERY



Having specialized in this class of machinery, building nothing else whatever, the **Roy Grinders** have become standard throughout the trade. *"Insist on the Roy"*

B. S. ROY & SON CO., WORCESTER, MASS.

Established 1868

Development of the Spinning Frame

(Continued from Page 14)

granted to Matthew Etchells, a cotton spinner of Mansfield, England, in 1793. This ingenious inventor simply used a piece of pipe through which he drew the cotton, the pipe being mounted on a wooden frame.

A somewhat later development was the double hollow-arm flier patented in 1834 by Otis Pettee, founder of the Pettee Machine Works, now part of the Saco-Lowell Shops at Newton Upper Falls, Mass. As in the patent to Etchells, Pettee's flier was long enough to allow the spool to be removed without taking off the flier. The double-arm flier is still in use on the cotton flier twister for high-ply or cabled yarns.

The common roving flier of the present day has one solid arm and one hollow arm, a presser being attached to the hollow arm. One of the most successful forms of modern fliers is the welded-steel flier. A patent on an improved method of manufacturing such fliers was granted in 1921 to E. B. Feaster, present agent of the Saco-Lowell Shops at Lowell, Mass. This process practically eliminates hand labor and the resulting irregularities in manufacture.

Cap Spinning.

The second method of spinning is with the cap. This is used at the present time for worsted, but a century ago it was used for cotton also. Many persons are under the impression that cap spinning is entirely of English origin.

On June 11, 1828, Charles Danforth, of Paterson, N. J., applied for a United States patent on his "immovable flier" or "bobbin flier." His patent was granted September 2, 1828. He described his invention as an "improvement in the construction, manufacture and management of bobbins and fliers for spinning cotton." After describing his cap spinning device, Danforth states that he "claims not only the exclusive right to construct fliers in this specific way, but the application of the principle of making and using fixed and immovable fliers, in all and every mode whatsoever, for the above purposes."

On November 10, 1828, John Thorp of Providence, R. I., applied for a patent on a cap spinning machine. On November 25, 1828, his patent was granted, in the remarkably short period of 15 days. John Thorp's patent, unlike Danforth's, shows the cap, spindle, whirl, rail, and thread eye practically as they exist today. What we call a "cap," he calls a "cup" or "can." He calls a "whirl" a "whur."

John Hutchison, a merchant of Liverpool, England, was the first to patent cap spinning in Great Britain. His application was filed July 30, 1829, or more than a year after

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OF EVERY DESCRIPTION

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AUTOMATIC SHUTTLES
Try Our New Automatic Shuttles for either cotton or woolen weaving. It is meeting every requirement with entire satisfaction.

Danforth had applied for his United States patent.

Although spinning caps have now been used for nearly a century, there have been no important improvements over the original designs.

Rings and Travelers.

The third method of spinning, which was invented about the same time as the cap, is ring spinning. Like cap spinning, it was an American invention, the first ring spinning patent being granted to John Thorp, of Providence, on November 20, 1828. This patent was granted to him within a few days of his cap-spinning patent.

His patent does not show the ring and traveler, but it shows two other constructions. The first is a two-piece ring, one section being stationary and the other section, which revolves, having a hook attached to it. The latter is dragged around by the yarn, just as a traveler is dragged around. In this case the spindle is positively driven, as it is on the modern spinning frame.

In Thorp's second construction the ring is positively driven and the spindle is dragged around by the yarn. The latter system has certain advantages and disadvantages. Whatever these may be, this construction has been invented and reinvented a great many times.

The most important improvement made in spinning with a ring, was the invention of the traveler. There is some doubt who was its inventor. A United States patent on a spinning frame was granted to Addison and Stephens, of New York City, in 1829. All records of this patent were destroyed by a fire in the Patent Office, but it is said that this patent showed the ring and traveler.

Other authorities maintain that the traveler was invented by a Mr. Jenks, of Pawtucket, R. I., in 1830, but that he did not apply for a patent. The first patent now available which shows the traveler in its present form was granted to John Thorp in 1844. He describes this as an improvement on his ring patent of 1828.

The inventions of the ring and traveler meant a great saving in initial cost of construction, as well as in power as compared to the flier, and a great increase in speed was also obtained. Centrifugal force, which limits the speed of the flier, has no harmful effect upon the traveler until much higher speeds. Then the heat produced due to friction, eventually melts or "burns" the traveler.

The original travelers were undoubtedly bent pins. The mill operatives were expected to "roll their own."

Builder Motions.

Closely allied to the general arrangement of the spinning frame is the traverse and the builder motion. The spinning wheel equipped with a flier had no automatic traverse and depended on the operative's shifting the yarn by hand from one guide hook to another. In his first patent of 1769 Arkwright followed this custom, and an operative would probably be kept busy doing by hand what was done automatically a few years later, Arkwright's second patent of 1775 shows a flier with an automatic traverse.

The traverse applied to spinning was invented by Leonardo da Vinci in Italy in 1519. However, his invention was not appreciated in his day, and we do not know of its application to a spinning frame until the second patent granted to Arkwright, mentioned above.

Practical Discussions

(Continued from Page 18)

per pound is not quite right, make it right by changing the filling accordingly.

Here is a good rule to ascertain the average number of yarn in your cloth.

Total Ends and Picks	Yds. Per Lb.	Probable Width in the Reed
166	3.20	28"

$$\frac{\text{800 Constant allows for 5\% take up.}}{\text{25 23-100 Av. No.}} = 25\ 23\text{-}100 \text{ Av. No.}$$

27. Below shows a good rule to get at the yards per pound:

Total Ends and Picks	Width in the Reed
166	38"

$$\frac{\text{800 Constant No.}}{\text{25 23-100 Average No.}} = 3.20 \text{ yds. per lb.}$$

Follow the list of operations given you by number, and you can ascertain like particulars for any other cloth sample. "XIX."

Answer to Alabama.

Editor:

Replying to Alabama's query regarding the life of spinning tape, would like to say that in my experience I have found that under proper conditions at his spindle speed his tape should run at least four months.

These conditions are: (1) A reliable man to do his taping, making sure that the laps do not run against the spindle. (2) The tape should not be too long or too short, but the idler pulley should run within about 1½ inches of the cylinder. (3) Use only thread that is made and sold especially for tape sewing. Putting plenty of stitches. I lap my tape about three inches.

I am sure he will get results from this system, and will give any further information that I can.

N. C. Spinner.

Suggestion That Silk Will Displace Cotton Is Absurd.

Blackburn, England.—The suggestion that artificial silk will ever displace cotton, or even become a serious competitor is absurd, according to T. Wilkinson, head of the Textile College, who declared recently that "cotton is not played out yet." He added that a combination of cotton and artificial silks, however, was a valuable idea and capable of enormous development.

Speaking of the British trade, Mr. Wilkinson said the progress made in the manufacture of artificial silk fabrics on the ordinary Lancashire loom was encouraging, and that mills were in the course of construction with a view to preparing the new artificial silk-yarn.

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Finest Quality

Greensboro Loom Reed Co.

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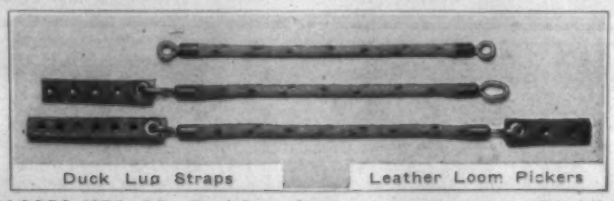
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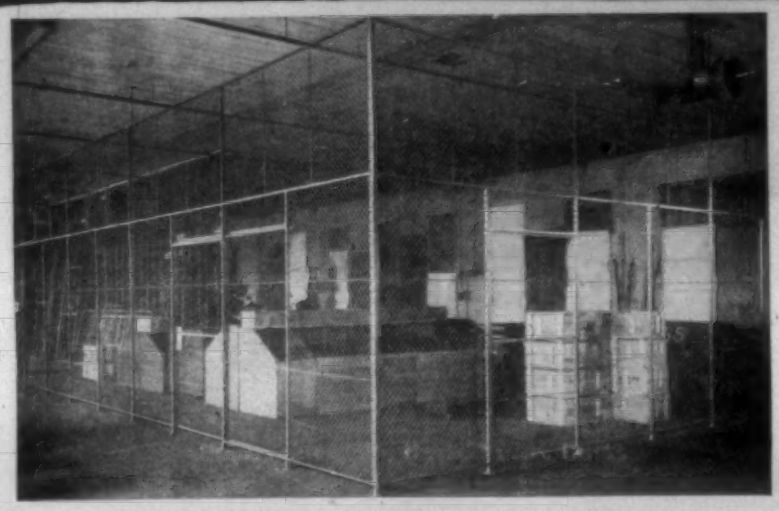
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Cones, Parallel Tubes and Cloth-Winding Cores

Eastern Office: 410 Olympia Building, New Bedford, Mass.
Canada: W. J. Westaway Co., Ltd., Hamilton, Ont.

Carding and Spinning

(Continued from Page 16)

Investigation showed that skeins were made from the yarn of two bobbins, and where the reelers could not readily find the end of the first bobbin to which to tie the second, they would simply twist the ends on the yarn and go ahead. In winding, it came in two at this point, and the consumer reported it "cut."

Tangled Skeins.—This may be caused by tying the under end of one skein to the upper end of the next, and when the reeler starts this way, the whole doff will be tied togther. Another way of tangled skeins is to allow the traverse motion to get out of fix. A very small skein, or very coarse ply yarn, may sometimes pass inspection without being cross reeled, but on the whole it is apt to cause trouble. It would seem unnecessary to call attention to such a self-evident fact, but we once knew of over 100 bales of yarn being condemned on account of one reel out of five being out of fix. At the time the yarn was sold for 25 cents per pound, but this lot was finally disposed of at 18 cents.

Black Oil.—This may get on the yarn before it is reeled, but with the most careful reelers the skeins occasionally get black. If the yarn is very valuable, it will often pay to lay aside these skeins until enough accumulate, and wash out the black spots. This can usually be done with soap and warm water, but if not, oxalic acid will greatly assist. On no account should this blackened yarn be allowed to go in with the regular quality.

Slack twist, double, single, corkscrew and other imperfect yarn should be removed by the inspector.

Packing.—Some mills simply loop a skein through a dozen or more and bale them in mass. Such a careless method can not fail to affect the value of the goods, for neatly packed goods always bring the best class of customers. On the inspector's table a rack should be made of standards about 18" long. From three to six skeins are then twisted together and laid in this rack. When it is full, the whole is tied together in two or three places, making a neat bundle which looks well and facilitates handling. The yarn for tying is slack or imperfect yarn, which is good for nothing else. In a month several hundred pounds of this can be used up and sold at the regular price.

GENERAL INFORMATION.

A reel should not be more than 15 feet long. If the spindles are spaced 3 inches apart, there will then be 50 spindles. A 54-inch reel is about 2 ft. 4 in. wide, a 60-inch 2 ft. 10 in., and a 90-inch 3 ft. 8in. They cost according to space and the number of spindles.

A prominent English builder makes reels with four swifts, two on each side, holding 10 skeins each, and running independent of each other. This makes a gain of at least 25 per cent in production, as the operative is tying off or doffing one skiff while the others are running. Reels are also built in England having a stop motion for each thread. Under certain conditions the English law requires that each skein be equal length.

CHAPTER VII.

WARPERS

Warpers may be divided into three classes: ball warpers, beam warpers, and chain warpers. Ball and beam warpers are nearly alike in construction, but chain warpers are not. One style now almost out of use, winds the yarn in the form of a loose rope around a frame of large diameter. This is known as a circular warping mill or reel warper. Another style is known as a Denn warper, and another retains some of the features of the Denn warper, but without electric stop motion.

As the beam warper, often known as the slasher, or section warper, is the most frequently used, we will consider it first.

In order to have good work at the looms, it is absolutely necessary to have beams with continuous ends. Where there are from 400 to 500 spools (some of the threads are sure to break, and if not detected quickly adn tied up, they will be lacking on the loom beam. There are two methods used to detect a broken end. One a mechanical one by means of drop wires, and the other also by means of drop wires, but with the stop motion operated by electricity. Under favorable conditions both will work well, but as the electric device gives a better chance for the machine to be stopped before the broken thread reaches the beam, it is preferred by a great many.

CALCULATIONS

About the only calculations about a warper is to ascertain the weight of yarn on the beam. Of course this is readily done by deducting the weight of the empty beam from that of the full one. It is desirable, however, for a superintendent to know what the beam ought to weigh as well as what it does weigh. He will not only know how closely the required numbers are being spun, but will also be enabled to better regulate the weight of cloth by making slight changes in the filling. A record should always be kept of the net weight of every beam, and by a very simple calculation the average number of yarn on every set for the slasher can be known and recorded.

(Continued Next Week)

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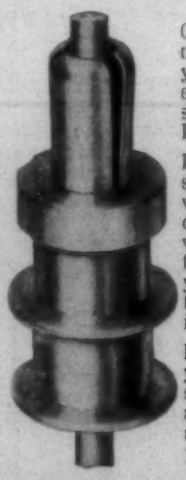


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Get 8 to 10% more yarn on your bobbins by equipping your spindles with our Patented Clutch.

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Foreign Yarn Trade Notes

Germany.

Imports of cotton yarns into Germany during the first nine months of 1924 amounted to 35,169 metric tons as against 18,530 during the corresponding period of 1923. In the 1924 period, Great Britain supplied 35 per cent of the total imports, or about 12,469 metric tons; Alsace Lorraine supplied 4,072 and Switzerland 1,486. The largest part of the imports of cotton yarns consisted of unbleached single yarns, also yarns of two or more strands; single twist, in the unbleached as well as bleached. German exports of cotton yarns were 4,943 metric tons in the first three quarters of 1924 as against 4,796 in the corresponding months of 1923.—Vice Consul Stanley R. Lawson, Dresden, November 15.

In the district of Munchen-Gladbach the cotton spinning mills are being kept busy. The prices of the yarns increased with the rise in cost of raw material, but the margin of profit is still regarded as insufficient.—Consul Emir Sauer, Cologne,

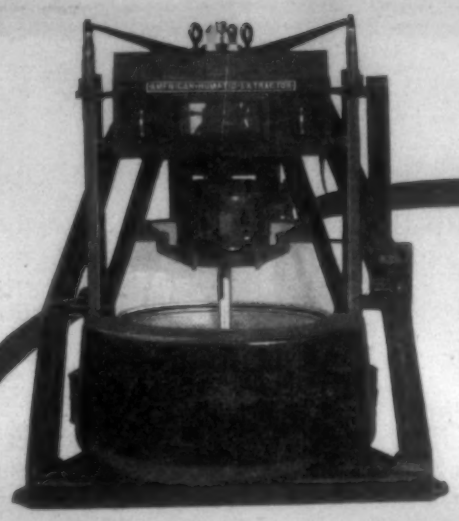
The revival of cotton yarn prices which set in at the end of September continued during the first week of October. Prices dropped, however, slightly during the second week but rallied at the end of the month.

Although some of the Saxon spinners are working double shifts, there is complaint of too heavy foreign yarn imports, particularly from Czecho-Slovakia. This is said to have adverse effect on prices. The present import duty on yarns is claimed to be entirely insufficient to offset the much heavier taxes which Saxon spinners are obliged to pay.—Commercial Attache C. E. Herring.

Austria.

Statistics issued by the Austrian Cotton Spinners and Weavers' Association for September confirm earlier reports of greater activity in the Austrian textile industry following many months of depression. (Figures shown in parenthesis are for 1923). Spindle activity at the end of September was 76 per cent (72 per cent) of spindles in place and reporting. Yarn production during the month increased 26 per cent over August or from 3 to 3.8 million pounds (3.5). Total deliveries increased 20 per cent from 2.9 to 3.5 million pounds (3.6). With the exception of an increase of yarn exports from 488,000 to 658,000 pounds (994,000), the increase in deliveries was confined largely to own mills which totalled 2.2 (1.90) million pounds. Domestic sales remained practically unchanged at 683,000 (783,000) pounds. Stocks increased slightly to 3.8 (3.8) million pounds, equivalent to one month's production.

New orders in September, 2.9 million pounds (2.2(, more than doubled the August volume while unfilled orders at the close of the month had increased from 4.5 to 6.2 million pounds (3.7), restoring normal levels and insuring continued activity during Ocotber.—Assistant Trade Commissioner Elbert Baldwin, Vienna.



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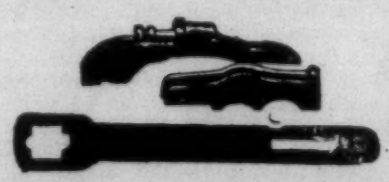
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Use Dixon Patent Stirrup Adjusting Saddles, the latest invention in Saddles for Top Rolls of Spinning Machines. Manufacturers of all kinds of Saddles, Stirrups and Levers.

WRITE FOR SAMPLES

Hoover Predicts Better Business

Washington, D. C.—An improvement in the textile situation may be looked for in the forthcoming year, declared Secretary of Commerce Hoover in an optimistic statement on the economic prospects for 1925.

Textiles and Northern soft coal have lagged in recovery during 1924, the secretary said, explaining that "the textiles are suffering in part from sharp competition of foreign imports and in part from shift in national habits."

The New Year begins with "'the economic structure of the world upon more solid foundations than at any time since the war," Mr. Hoover goes on to say. He points to the recovery of agriculture as the outstanding economic development of the year in this country. Industrial production generally has come back to about the same point it occupied at the end of 1923, the secretary asserts.

The wholesale price index is about 50 per cent higher than pre-war, the cost of living is about 72 per cent higher, and the wage level is around 100 per cent higher, thus giving labor the highest real wage it ever has enjoyed, the statement shows.

'We are on the march of wholesome recovery from the war and there is no present indication of inflation," the secretary says, concluding with the observation that "forces in motion both at home and abroad mark solid progress toward peace and toward prosperity for the coming year."

World Producing More Goods.

The statement follows in part:

"Generally the world is producing more goods, there is fuller employment, there are higher standards of living, more assurance of economic stability for the future and more promise of peace than we have seen for many years. The world is by no means free from liability to economic shock, yet the forces today in motion all tend to great promise for the forthcoming year.

"In our own country the outstanding economic development of the year has been the very large recovery in agriculture after its two year lag behind the recovery of industry. The farmers have a large measure of losses in the last three years yet to recover, but their outlook is encouraging. There are some secondary difficulties still remaining, particularly in the cattle industry and the effect of the sub-normal corn crop, but the prices of all farm products are gradually moving toward the general average of commodity prices. This improvement in prices of farm products has been paralleled with some decrease in the prices of many industrial commodities, such as fuel, building materials, metals, etc., so that there has been little change in the average of all price levels, and thus the farmers' purchasing power is being remedied in both directions.

Wholesale Prices Fairly Firm.

"While there has been a good deal of adjustment in prices of single commodities during the year, the average wholesale prices of all commodities has varied but 3 per cent as between the ends of the years 1922, 1923, and 1924. It would thus appear that we are tending to the common level in prices of about 50 per cent over pre-war, which seems to represent at least our present economic plane in prices.

"The average wage in industry has been stable during the last year, and remains around 100 per cent above pre-war, while the cost of living has maintained almost exactly the same level at the end of each of the last three years, 1922, 1923 and 1924, about 72 per cent over pre-war. Our labor, therefore, continues to enjoy the highest real wage in its history. There was some unemployment in the middle of the year but it has now been largely overcome.

"While there was some slackening of manufacturing production as a whole in the spring due in part to the uncertainties of election and in part to reduction of accumulated stocks, yet there was but little slackening at any time in consumption of major articles as shown by the continued high levels of car loadings, of sales of wholesale and retail establishments and of construction activities. The end of the year finds us with a recovered industrial production at practically the same levels as a year ago.

Sees Improvement in Textiles.

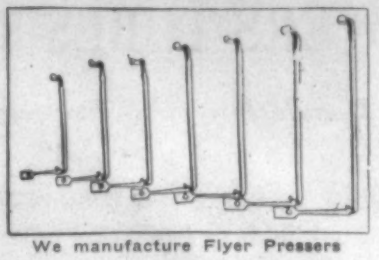
"Two industries — textiles and Northern soft coal—have lagged in recovery. The textiles are suffering in part from sharp competition of foreign imports, and in part from shift in national habits. An improvement may be looked for in the forthcoming year. . . . .

"Our foreign trade has shown considerable expansion during the year in exports, and some decrease in imports. The increase in export figures has been due in some degree to the higher prices of agricultural produce, though chiefly to general expansion in all exports; the decrease in imports has been due in large part to lessening activity in production lines at the middle of the year, thus reducing the requirements for imports of raw material. The total of our exports for the year will show about $4,600,000,000, and our imports about $3,600,000,000. The merchandise balance will be about $1,000,000,000 in our favor. The net gold imports for the year in partial liquidation of this balance amounts to about $250,000,000.

U. S. Imports for Consumption of Countable Cotton Cloths.

The value of the United States imports for consumption of countable cotton cloth during October was greater than in any month since April, and amounted to $3,244,597 compared with $2,492,540 in September, according to fifigures prepared by the United States Tariff Commission. The October figures show an increase over the previous month in the ttal of each classification grouped according to method of weaving and yarn counts, the largest gain being shown in cloths women from the following yarn numbers: 21-30, 31-40, 41-50.

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10:55 p. m. Lv. Columbia	Lv. 5:40 a. m.
3:55 a. m. Ar. Savannah	Lv. 12:45 a. m.
8:15 a. m. Ar. Jacksonville	Lv. 8:15 p. m.

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Internation Trade in American Cotton Goods

(Continued from Page 7)

"Furthermore, at the beginning of 1924, Manchester prices were less than one-half cent per pound different from the end of 1924, notwithstanding that there was a difference of about 13 cents per pound in raw cotton between those two dates. Understand, that these Manchester quotations are based upon rates of exchange current at the time, and the comparative steadiness of their prices is partly attributable to the strengthening of sterling exchange, which, in effect, cheapened their raw cotton, but tends to steady their cloth quotations translated into dollars and cents of current rates of exchange.

"The outlook for the cotton spinning industries throughout the world is much brighter, especially in England, Italy and the United States, active as compared with 34,240,000 were about 28,710,000 cotton spindles. Last July in the United States there ber 1924, however, spindle activity active during July, 1923. In Novem this is considerably below the 34,- had increased to 31,- 000,000, and while 125,000 of November, 1923, there is a steady monthly improvement being reported.

"Exports of raw cotton from the United States are also much improved over a year ago, for they are approximately 800,000 bales in excess of the four months' period from July 1 to November 30, 1923.

"The world cotton crop for the cotton year 1924-1925 is much in excess of that a year ago. The latest reports indicate it to be 23,300,000 bales of about 478 pounds each, which is more than 4,000,000 bales better than last year's world crop. No doubt this will stimulate yarn and cloth production in India, China and on the continent, while Great Britain has already shown an increase in activity consequent to more substantial sales in her export market.

Domestic Trade Stronger.

"There has been a marked improvement in the cotton trades in the United States, but the existing situation is far short of what might be termed a 'boom' period, and, while manufacturers and merchants are more active than they were a few months ago, they have hardly kept pace with the general impulse of trade in this country, partly due to import competition and changing habits of our increasing population. The per capita consumption of raw cotton in the United States has for the last decade averaged about 27 pounds per annum. Figures available for the years 1919 and 1921 show that of this 27 pounds, about 15 pounds go into the per capita consumption of cloth over 12 inches in width each year, leaving about 11½ pounds per capita to be diverted to other uses, which might include knit goods, thread, braids, cord fabrics for tires, absorbent cotton and stuffings.

"For the first time, it is believed a compilation has been made showing the annual per capita consumption of cloth in square yards. It shows that notwithstanding new and varied applications of cotton cloths for personal and household uses, we have not increased our per capita consumption to any marked extent during the last 25 years. In fact, the per capita consumption of square yards of cotton cloths, over 12 inches wide, was about 54 square yards in 1919 compared with 55 and a fraction square yards in 1899. In 1914 we consumed about 66 square yards per capita compared with 54 square yards in 1919 and 58 square yards in 1921. The figures for 1923 are not yet available. Although the per capita consumption of square yards in 1921 was 58 compared with 54 in 1919, it is significant that in 19119 the cotton poundage represented in this per capita consumption was 15.55, compared with 15.10 pounds in 1921, indicating a distinct demand for light weight goods.

"These are facts which should attract the attention and command the consideration of the best analytical minds in the textile industry. If we are to continue to progress in domestic and international trade, a long-range view must be taken, definite policies formulated, and operation must be based on known facts rather than hunches."

Changes Urged in Cotton Textiles

(Continued from Page 8)

facturers have made no effort, except in rare cases, to take advantage of the mine of style information waiting in Paris for any keen and experienced observer.

While there is bound to be a certain degree of uncertainty regarding the success of any style which a textile manufacturer may produce, the French textile manufacturer has evolved a plan whereby he reduces this risk to a minimum. This plan practically amounts to making a laboratory of the style salons of Paris. The leading textile producers of France place in the hands of the Parisian couturiers anywhere from three to twelve yards of each of their new materials—generally on consignment.

The Paris dressmaker uses these fabrics for his models and when the American or French buyer signifies his confidence in the success of that model the textile manufacturer feels safe in going into production on that particular fabric.

Naturally this plan does not always work. There is no question, however, that the French manufacturer, by following this plan, is better able to keep in tune with style development than is the American manufacturer who is three thousand miles away from style sources and who makes no apparent effort to overcome this handicap.

What Mills Should Do.

At the present time it is probably not possible for American mills to produce many of the exquisite fabrics found in France. Neither the designers, the dyes, nor the labor is available. A Parisian, when con-

$100,000 INVOLVED IN SUBURBAN LAND SALE

Seventy-five Acres of J. Van Lindley Estate Purchased by First Realty and Loan Company

Over $100,000 was involved in the sale yesterday of 75 acres of the J. Van Lindley estate, located on the Winston-Salem road just north of the Masonic home, to the First Realty and Loan Company.

This tract of land has a frontage of about 1,700 feet on the Greensboro-Winston-Salem highway. The First Realty and Loan Company is planning to develop it into residential property. The sale was negotiated by T. V. Carter.

The land described above is planted in choice varieties of flowering shrubs, trees, etc., and a clearance price will be made on them to Textile plants or others interested, that can use a quantity. Write for full particulars.

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fronted with this situation, exclaimed, "If you haven't the dyes, get them. If you haven't the labor, train it, and your mills can get the designs from Paris as well as anybody else. I should think that your cotton industry would be ashamed to admit that they could not duplicate the facilities of France in making cotton fabrics." The American manufacturer, instead of accepting such a challenge, turns to Washington for protection against the competition of superior foreign fabics. Even though the tariff becomes directly prohibitive, so that American fabrics have the market all to themselves, it will not lead the American cotton industry out of the wilderness of its difficulties.

The American woman today is the most stylishly dressed person in the world, and she intends to continue to be. She is going to have stylish wearing apparel regardless of cost. If she cannot get cotton materials that embody her ideas of style she will turn to substitutes.

Therefore, the only salvation of example of the silk industry and American mills is to profit by the make a serious scientific attempt to produce fabrics which the American woman will recognize as the equal of anything she can buy anywhere.

Such a program involves elaborate expansion in every branch of the industry. But forward-thinking mill executives will accept this condition as a call-to-arms, and instead of debating whether or not their mills shall be moved South, they will mobilize capital and energies for the development of a new cotton manufacturing industry, which on its own feet can keep pace with the other branches of American manufacture, which have succeeded in making the slogan "Made in U. S. A." a familiar mark throughout the world.

November Hosiery Output 4,136,952 Dozen Pairs

Washington.—A total of 4,136,952 dozen pairs of hosiery of all classes was produced during November, 1924, according to the regular monthly hosiery production report made public by the Bureau of the Census, Department of Commerce. The report is based upon returns received from 316 establishments representing 403 mills.

Of the total quantity produced during November, 52,094 dozen pairs were men"s full fashioned, and 1,611,573 dozen pairs men's' seamless; 599,224 dozen pairs women's' full fashioned and 1,055,127 dozen pairs women's seamless; 422,770 dozen pairs boys' and misses', all styles; 376,092 dozen pairs children's and infants', all styles, and 20,072 dozen pairs athletic and sports, all styles.

Orders and stocks for the month were as follows:

Shipments during the month, 4,109,672 dozen pairs; finished product on hand at end of month, 7,635,152 dozen pairs; orders booked during month, 5,431,093 dozen pairs; cancellations received during month, 221,879 dozen pairs, and unfilled orders on hand at end of month, 7,893,555 dozen pairs.

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Must Stabilize Cotton Production

Washington,—A steady decline in cotton production in the United States, accomplished by increases in price of the American staple has been reflected in increasing activity on the part of foreign Governments to develop potential cotton areas outside of America, as well as in a slowing down of demand for finished mill products, according to an exhaustive report on the world cotton situation compiled by the United States Chamber of Commerce.

While the chamber's agricultural bureau does not believe that there is any immediate danger that the United States will lose its position of dominance in the world cotton markets, yet it is convinced that the situation demands more aggressive efforts to stabilize production.

The report suggests that one way to stabilize production is by means of increased yields per acre. This, it is pointed out, automatically would reduce production costs and give the grower a just margin of profit, as well as permitting cotton to sell at a price which would tend to increase consumption.

"The most serious obstacle in the path of increased cotton production in the Nnited States," the report goes on to say, "'are adverse weather conditions, the boll weevil, a labor shortage and poor farming.

"It is estimated that for the past six years the South annually has failed to prouce 4,000,000 bales of cotton as a direct result of the cotton boll weevil.

"While calcium arsenate has been proven to be an efficient agent for the control of the weevil, in 1923 less than 5 per cent of the total cotton acreage of thhe South was treated with this poison.

"Early fall destruction of cotton stalks is an economical means of reducing weevil damage the following year. As yet a relatively small percentage of cotton planters practise this. In many sections of thhe South, climate conditions prevent early fall plowing of stalks as a weevil-control measure.

"'There is need for a cheaper poison than calcium arsenate at the present marget price, for the benefit of the marginal producer of cotton.

"Many cotton-producing areas in the South show serious depletion of soil fertility due primarily to one-crop farming. There is need for reorganization of farm practise in the cotton belt to the end of restoring soil fertility and eliminating some of the hazards of the single-crop farming. A wider use of legumes and better land drainage would prove of great benefit."

In discussing the labor problem, the report says that "due to a steady migration of Cotton Belt negroes to industrial centers of the North and East, there has developed an acute labor shortage in this region of thhe United States. Alabama, Florida, Georgia and Mississippi perhaps have lost more heavily of negro labor than any other States. In 1922-1928, 478,700 negroes are estimated to have migrated from the South. This migration still is under way."

The report then discusses the cost of producing cotton. "Figuring on cotton production costs vary widely," it says, the determining factor being rate of yield per acre. The available data shows that this cost runs from $1.45 a pound for lint for yields of 20 pounds of lint and under per acre, to .9 cents a pound for yields of 500 pounds and over.

"Cheaper cotton from the standpoint of production costs will be produced in the South when per-acre yields are increased, not necessarily through an increase of acreage planted to the staple. The present tendency, however, is toward an increased acreage rather than toward increased yields per arce."

In addition to a discussion and analysis of production problems, the report analyzes the world situation with respect to production and demand, and indicates to what extent foreign Governments have been led to make an effort to stimulate production of cotton in other lands. The point is brought out that there is no just cause for apprehension that foreign countries will greatly encroach upon the established American industry of proucing cotton in the very near future and that it is wholly within the power of this country to forestall such competition.

Stocks of Cotton Goods in Egyptian Bonded Warehouses Decrease.

Stocks of cotton goods in Egyptian bonded warehouses continued in November the marked decline manifested in October, dropping to the lowest total reached since January 31, according to report to the Department of Commerce from Trade Commissioner May, Alexandria. The November 30 total was 6,789 bales and cases weighing 2,021,395 kilos kilo equals 2,2046 pounds), as compared with 7,633 bales and cases weighing 2,247,573 kilos on October 31. Stocks of Manchester goods fell during November from 2,822 bales and 731 cases to 2,580 bales and 690 cases, and goods from other countries decreased from 905 bales and 3,195 cases to 854 bales and 2,659 cases. These declines may be considered as due primarily to end-of-season liquidation, and also in a large measure to active buying in the interior following the cotton harvest and the general settlement for all agricultural crops. Good prices have been realized. Importers generally report fairly active bookings for next spring deliveries.

Clark's Cotton Records

Statistics Week Ending Jan. 10, 1925.

	1924.	1923.	1922.
Visible supply American	4,765,000	3,090,000	3,372,000
Into sight during week	409,000	262,000	262,000
Mill takings during week	430,000	354,000	293,000
Mill takings since Aug. 1st	7,040,000	6,329,000	6,994,000
Exports during week	177,000	78,000	95,000
Exports since Aug. 1st	4,609,000	3,375,000	2,888,000

Government Reports.

Acreage this season	40,403,000	38,709,000	34,016,000
Indicated crop July 25	12,144,000	11,412,000	11,065,000
Indicated crop middle of July	11,934,000		
Indicated crop end of July	12,361,000	11,516,000	11,449,000
Indicated crop middle of Aug.	12,956,000		
Indicated crop end of Aug.	12,787,000	10,788,000	10,575,000
Indicated crop middle of Sept.	12,596,000		
Indicated crop end of Sept.	12,499,000	11,015,000	10,135,000
Indicated crop middle of Oct.	12,675,000		
Indicated crop end of Oct.	12,816,000		
Indicated crop middle of Nov.	12,992,000		
Indicated crop end of Nov.	13,153,000		
Ginned to Oct. 1st	4,527,671		
Ginned to Oct. 18th	7,600,826	6,415,145	6,078,321
Ginned to Nov. 14th	11,163,400		
Ginned to Dec. 1st	12,225,000		
Carryover beginning of cotton year	2,319,000	2,573,000	4,879,000

Cotton Exports.

Following is a comparison of the exports by months in running bales, including linters:

	1924.	1923.	1922.
August	277,641	244,415	272,808
September	737,010	689,435	378,390
October	947,556	781,722	798,664
November	1,306,000	770,002	858,337
December	———	845,581	607,853
January	———	546,253	473,436
February	———	482,146	359,657
March	———	332,168	318,210
April	———	320,774	259,984
May	———	326,357	160,368
June	———	230,979	214,851
July	———	211,633	171,469
		5,772,000	4,864,027

American Consumption of All Kinds of Cotton, Excluding Linters.

(In running bales, 000s omitted.)

	1924-25		1923-24		1922-24	
	Per Month	Per Season	Per Month	Per Season	Per Month	Per Season
August	357	357	492	492	526	526
September	435	793	484	975	494	1,020
October	530	1,322	542	1,517	534	1,554
November	492	1,814	532	2,049	579	2,133
December	———	———	462	2,510	529	2,663
January	———	———	577	3,088	610	3,273
February	———	———	508	3,595	567	3,840
March	———	———	484	4,079	624	4,464
April	———	———	480	4,559	577	5,041
May	———	———	414	4,991	621	5,661
June	———	———	350	5,341	542	6,203
July	———	———	347	5,688	463	6,666

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Cotton Goods

New York.—Trading in the cotton goods markets was quiet during the week. In spite of lower cotton prices, however, print cloths and lightweight sheetings showed only a very slight drop in prices. The market for heavy cotton goods continued very firm. Sale of a million pounds of tire fabrics was one of the features of the week's business and many more inquiries forecast further large business in these goods. The coarser grades of colored cottons continued very steady. Brown and bleached goods sold more freely in wholesale markets. Wash goods moved better with many novelties being shown. Percales sold moderately well and there was some improvement in the demand for fancy ginghams.

Buying of gray goods was light during the week. Prices held steady, with mills showing a tendency toward higher prices as the week closed. Sales of print cloths were small. Sateens and most convertibles were dull. Market reports indicated a very large sale of 128x68s all combed domestic broadcloth at 21¾cents, although the usual quotation on these goods was 23½ cents.

There was not much interest in cotton duck during the week, the few inquiries covering wide and sail duck. Spot lots of army duck were reported small and hard to locate. Prices showed little change.

Dress flannels were in good demand and advances were paid for spot delivery and mills were able to secure higher prices for the most popular colors. There was also some improvement in the demand for twills.

Silk and cotton mixtures were in light demand. The price situation on these goods has become somewhat irregular, due to the fact that some mills which are in need of business again have quoted prices somewhat below the market.

The week continued quiet in the Fall River print cloth market, with estimated sales placed at 30,000 pieces. Wide and narrow plain goods have been very quiet, with sateens selling in a small way for delivery within the next two or three weeks. Buyers have been indifferent, although some business was offered at prices slightly under the market quotations and which mills generally refused. Trading has been confined principally to the 36-inch styles in small quantities.

It is apparent there will be slightly more operation in the near future as the result of the acceptance of the wage reduction. Considerable feeling is abroad that some of the corporations closed for a long period of time will resume operations as soon as practical.

The John V. Farwell Company, Chicago, says in its weekly review of trade:

"Wholesale dry goods business shows good increase over corresponding week of a year ago. Road salesmen are out on their territories and retailers are sorting up their spring stocks, giving impeuts to the movement of silks, flannels, white goods, cotton goods and wool dress goods lines. Buyers have been in the market in larger numbers than during the corresponding week of last year. Collections show improvement.

Cotton goods prices in primary markets were quoted as follows:

Print cloths, 28-in., 64x64s	7¼
Print cloths, 28-in., 64x60s	7
Print cloths, 27-in., 64x60s	6¾
Gray goods, 38½-in., 64x60s	9¾
Gray goods, 39-in., 68x72s	10½
Gray goods, 39-in., 80x80s	13⅜
Brown sheetings, 3-yard	14½
Brown sheetings, 4-yard	11¾
Brown sheetings, stand.	15½
Ticking, 8-ounce	26
Denims	10½
Staple ginghams, 27-in.	10½
Kid finished cambrics	9 a10
Dress ginghams	17½a20
Standard prints	9¼

U. S. Imports of Dyes in 1924 $320,665 Less Than in 1923.

Washington.—According to a preliminary summary of dye imports for 1924, made public by the Department of Commerce in collaboration with the U. S. Tariff Commission, there was a decrease in dye imports during 1924 as compared with 1923 of 272,203 pounds, valued at $320,665.

Imports of synthetic dyes during 1924, according to the preliminary figures, were 2,825,990 pounds with a value of $2,830,698, as compared with 3,098,193 pounds valued at $3,151,363 during 1923.

Hot Stuff

Furnace heat is necessary in making good travelers, but friction heat ruins 'em if they don't fit just right.

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The Yarn Market

Philadelphia, Pa.—The cotton yarn market was very quiet during the week. Sales were small and were limited only to small quantities for spot and prompt delivery. Spinners held prices very firm in spite of the fact that dealers sold spot lots at prices considerably lower than mills would accept. The very firm way in which spinners have held prices during the present period of seasonal dullness has been one of the features of the market for the past two weeks. Spinners' stocks are reported as being unusually low and as mills generally are operating only on orders, it is believed that a resumption of buying by yarn consumers will be kuickly passed on to the spinners. Yarn customers have not yet gotten over their inventory period and are consequently not ready to take on stocks.

Quotations from Southern mills, which are considerably above dealers', prices in this market, indicate that the mills are in a strong position for the next thirty to sixty days and that there is little likelihood that they will reduce prices.

Buying by both the knitting and weaving trades was only spasmodic. The amount of business done, however, during the first three days last week, was considerably greater than during the last three days of the preceding week and considerable more interest in the market was noted.

Quoted prices are regarded as merely nominal. The published list in this market, quoted below, is considerably lower than spinners' asking prices:

Southern Two-Ply Chain Warps.

2-ply 6s	41	a	2-ply 26s	49	a50
10s	42	a	2-ply 30s	50½	a51
2-ply 16s	44	a	2-ply 40s	58	a60
2-ply 20s	44½	a45	2-ply 50s	66	a68
2-ply 24s	48	a			

Southern Two-Ply Skeins.

8s	39½	a	40s	55	a57
10s to 12s	41	a42	40s ex.	58	a60
14s	42½	a	50s	65	a67
16s	43½	a	60s	74	a
0s	44	a44½	Tinged Carpet—		
24s	47	a	3 and 4-ply	36½	a37½
26s	48	a	White Carpet—		
30s	50	a51	3 and 4-ply	38	a39
36s	54	a			

Part Waste Insulated Yarn.

8s, 1-ply	35	a36	12s, 2-ply	39	a40
8s, 2, 3 and 4-ply	26	a37	20s, 2-ply	44	a
			26s, 2-ply	38	a
10s, 1-ply and 3-ply	37½	a38	30s, 2-ply	50	a

Duck Yarns.

3, 4 and 5-ply—			3, 4 and 5-ply—		
8s	40	a	16s	44	a
10s	41	a	20s	45	a
12s	42	a			

Southern Single Chain Warps.

10s	41½	a	24s	48	a
12s	42	a	26s	49	a
14s	42½	a	30s	50	a51
16s	43½	a	40s	57	a58
20s	44	a			

Southern Single Skeins.

6s to 8s	39	a	20s	44	a
10s	40	a	24s	46½	a
12s	41	a	26s	48	a
14s	42	a	30s	50	a
16s	43	a			

Southern Frame Cones.

8s	39	a	22s	42½	a
10s	39½	a	24s	44	a
12s	40	a	26s	44	a44½
14s	40½	a	28s	46	a
16s	41	a	30s	48	a
18s	41½	a	30s tying in	47	a
20s	42	a	40s	56	a57

Southern Combed Peeler Skeins, Etc.

2-ply 16s	55	a56	2-ply 50s	73	a75
2-ply 20s	57	a58	2-ply 60s	78	a80
2-ply 30s	60	a62	2-ply 70s	88	a90
2-ply 36s	63	a67	2-ply 80s	98	a
2-ply 40s	67	a69			

Southern Combed Peeler Cones.

10s	50	a	20s	60	a
12s	51	a	32s	62	a
14s	52	a	34s	64	a
16s	53½	a	36s	65	a
18s	53	a	38s	68	a
20s	53½	a	40s	70	a
22s	54	a	50s	75	a
24s	54½	a	60s	80	a
26s	55	a	70s	90	a
28s	57	a	80s	95	a

Eastern Carded Peeler Threads Twist Skeins.

20s, 2-ply	52	a	36s, 2-ply	62	a
22s, 2-ply	53	a	40s, 2-ply	64	a
24s, 2-ply	55	a	45s, 2-ply	69	a
10s, 2-ply	58	a	50s, 2-ply	74	a

Eastern Carded Cones.

10s	47	a	22s	53	a
12s	48	a	26s	55	a
14s	49	a	28s	57	a
20s	52	a	30s	59	a

Bulletin of Yarn Spinners' Association.

The weekly bulletin of the Southern Yarn Spinners' Association says:

"The cotton yarn market remains quiet with little demand and prices firm in spite of fluctuation in the cotton market. Inventories of both consumer and spinner are believed to show but small accumulations. Spinners are well supplied with orders as is evidenced by the short time close down during the holidays. Production is being kept well within the volume of demand, and there is no evidence of accumulation of stocks.

"It is generally believed that within a few weeks demand will materially improve. In the meantime spinners are holding prices firm, slightly in advance of reported quotations."

Austrian Textile Industry Inactive.

The textile industry in Austria is far from prosperous, due to the high cost of production and competition from Czecho-Slovakia. The situation in the cotton weaving mills is very unfavorable, except in those producing colored materials, Consul Heingartner, Vienna, informs the Department of Commerce. Business in the wool weaving mills is slack but it is hoped that the new customs tariff will evert a favorable influence upon it. The same applies also to the worsted yarn mills. In the linen weaving industry some 20 to 30 per cent of the looms are idle. Considerable activity is noted in the lace industry.

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WANT POSITION as overseer spinning. Overseer for 20 years on all counts and colors, both carded and combed, from various stocks. Can get results. Would consider $33 weekly, with free rent. No. 4327.

WANT POSITION as superintendent. My experience covers mills in both North and South on a wide variety of goods and yarns. Excellent references to show past record of unusual achievement. No. 4328.

WANT POSITION as superintendent of cotton yarn or good mill. Man of unusual ability and can give references to show excellent past record. No. 4329.

WANT POSITION as overseer spinning or night superintendent. Qualified by experience and training to handle room on efficient basis. A-1 references. No. 4330.

WANT POSITION as overseer weaving. My experience covers wide variety of fancy goods, including silk mixture. First-class references as to character and ability. No. 4331.

WANT POSITION as overseer carding or spinning, or would take good second hand's place. North Carolina preferred. Long experience. I. C. S. graduate, age 30, married, sober. References. No. 4332.

WANT POSITION as superintendent or overseer weaving. Practical, experienced man on many different fabrics. Long and satisfactory record as overseer and superintendent. Best of references. No. 4333.

WANT POSITION as overseer cloth room. Now employed, but wish larger place. Long experience. Best of references. No. 4334.

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WANT POSITION as superintendent, prefer yarn mill. Now employed but can change on short notice. Best of references. No. 4336.

WANT POSITION as superintendent, or overseer carding, spinning and twisting. Experienced man with excellent past record. ood references. No. 4337.

WANT POSITION as overseer carding or spinning, or both. Now employed, but want larger place. First-class references to show character and ability. No. 4338.

WANT POSITION as overseer weaving or assistant superintendent. Have had 19 years as overseer on all grades of yarn and cloth. Excellent references. No. 4340.

WANT POSITION as overseer carding or spinning or superintendent of yarn mill. Now employed but can change on short notice. Can get quality production at low cost. Best of references. No. 4341.

WANT POSITION as overseer carding, 20 years as overseer on all classes of work. Now employed. Age 40, married, have family. Good references. No. 4342.

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Cotton's Manifold Uses

The widespread usage and general utility of the South's great staple, cotton, is the subject of an interesting contribution in The Wall Street Journal, that serves to show how and why cotton is king in fact as well as in name. It is, as the New York paper observes, the one indispensable product of the American farm—omnipotent and omnipresent in the life of the people. We quote:

"We arise in the morning from a bed clothed in cotton: we step on a cotton rug; a cotton shade is raised to let in the light; we wash with soap composed partly of cottonseed oil and dry on a cotton towel; our clothing is principally of cotton. Even at the breakfast table we are not independent of the textile potentate. Cottolene has perhaps been substituted for lard in the biscuit we eat; the butter is often a product of cottonseed oil. The coal that is burned in heating our room may have been mined by the light of a cotton oil lamp; the tonic we may take perhaps contains an extract of cotton rootbark; the tobacco we smoke grew under a cotton cover and is put up in a cotton bag; the newspaper we read may be printed on cotton waste paper. The wheels of the trains that carries us to work also contains some tightly compressed cotton and if we should go by automobile that vehicle has taken into its manufacture about 100 pounds of cotton. From the cradle to the grave and every part of the earth cotton is indispensable."

As a matter of fact, scientists steadily are finding new and important usuages for cotton, and although the comment of The Wall Street Journal brings out many novel uses to which the staple is put, there are scores of others not there catalogued, and the field of its usefulness is broadening all the while.—Atlanta Journal.

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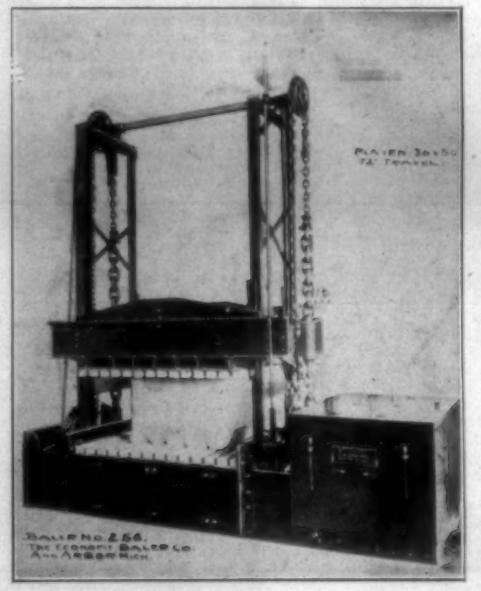
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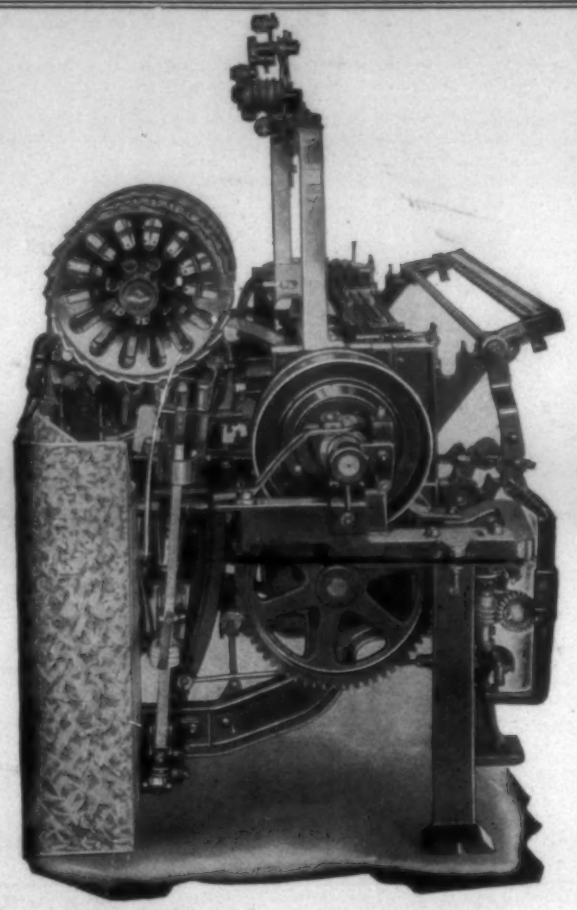
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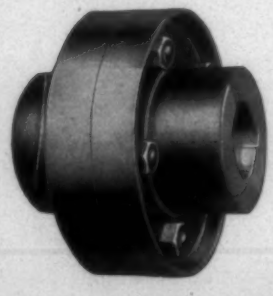
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